For Parents: Introduction

Why this Workbook?

We believe kids get better at math with practice, resulting in confidence and positive attitude towards math that is required to excel in school.

This workbook is intended for 2nd graders, where students have already mastered single digit addition and subtraction.

This workbook provides kids with additional math practice that complements and supplements what is taught at school. The focus is on key foundational mathematics basics: addition, subtraction, and introduction to multiplication, division, geometry, and fractions.

Note: Many schools do not start multiplication or division until 3rd grade, but we are covering these concepts here since it does take time and practice to get comfortable with multiplication and division.

How to Get Your Kid to Practice Math
More math practice will increase math fluency and speed, resulting in math confidence. But how do we get our kids to sit down and do math worksheets?

Create a Habit of Math Practice
All habits can be broken down into: 1) Cue or Trigger, 2) Routine, 3) Reward.

Turning math practice into a habit is figuring out what kind of cue/reward you would like to create for your child, and works for you and your family.

Examples:
- Kid comes home (cue), math practice (routine), gets a snack (reward)
- Kid finishes dinner (cue), math practice (routine), dessert (reward)
- Kid finishes afternoon snack (cue), math practice - 5 pages (routine), screen time for X minutes (reward)

If you have feedback, questions, or would like a printable pdf of pages you like in the book, email us at mathbook2@numberbondgames.com

Progress Chart

When a page is completed, add a sticker or smiley face to a square below.
When the whole chart is completed, you would have completed 100 pages!

Warm Up: Addition

2 + 4 = 6	3 + 6 = 9	2 + 5 = 7	3 + 3 = 6	4 + 3 = 7
4 + 4 = 8	5 + 4 = 9	5 + 5 = 10	6 + 5 = 11	7 + 5 = 12
7 + 2 = 9	3 + 7 = 10	9 + 2 = 11	6 + 4 = 10	5 + 6 = 11
5 + 9 = 14	9 + 3 = 12	8 + 2 = 10	9 + 5 = 14	3 + 5 = 8
8 + 4 = 12	9 + 6 = 15	9 + 9 = 18	10 + 10 = 20	15 + 10 = 25

Warm Up: Complete the Math Sentences

$4 + 2 = \boxed{6}$

$4 + \boxed{6} = 10$

$\boxed{6} + 6 = 12$

$7 + 3 = \boxed{10}$

$3 + \boxed{7} = 10$

$\boxed{5} + 3 = 8$

$3 + 2 = \boxed{5}$

$5 + \boxed{8} = 13$

$\boxed{3} + 4 = 7$

$9 + 7 = \boxed{16}$

$5 + \boxed{10} = 15$

$\boxed{7} + 7 = 14$

$8 + 7 = \boxed{15}$

$15 + 5 = \boxed{20}$

Warm Up: Subtraction

7	8	8	3	2
- 5	- 2	- 6	- 1	- 2
2	6	2	2	0
9	20	15	10	8
- 6	- 10	- 6	- 8	- 2
3	10	9	2	6
17	9	7	10	9
- 7	- 2	- 3	- 7	- 5
10	7	4	3	4
6	20	18	30	15
- 3	- 1	- 8	- 10	- 5
3	19	10	20	10
14	6	12	14	12
- 10	- 6	- 2	- 7	- 7
4	0	10	7	5

Warm Up: Complete the Math Sentences

9 - 2 = 7

10 - 4 = 6

5 - 3 = 2

8 - 3 = 5

13 - 0 = 13

8 - 4 = 4

10 - 5 = 5

7 - 3 = 4

9 - 4 = 5

8 - 3 = 5

10 - 9 = 1

10 - 4 = 6

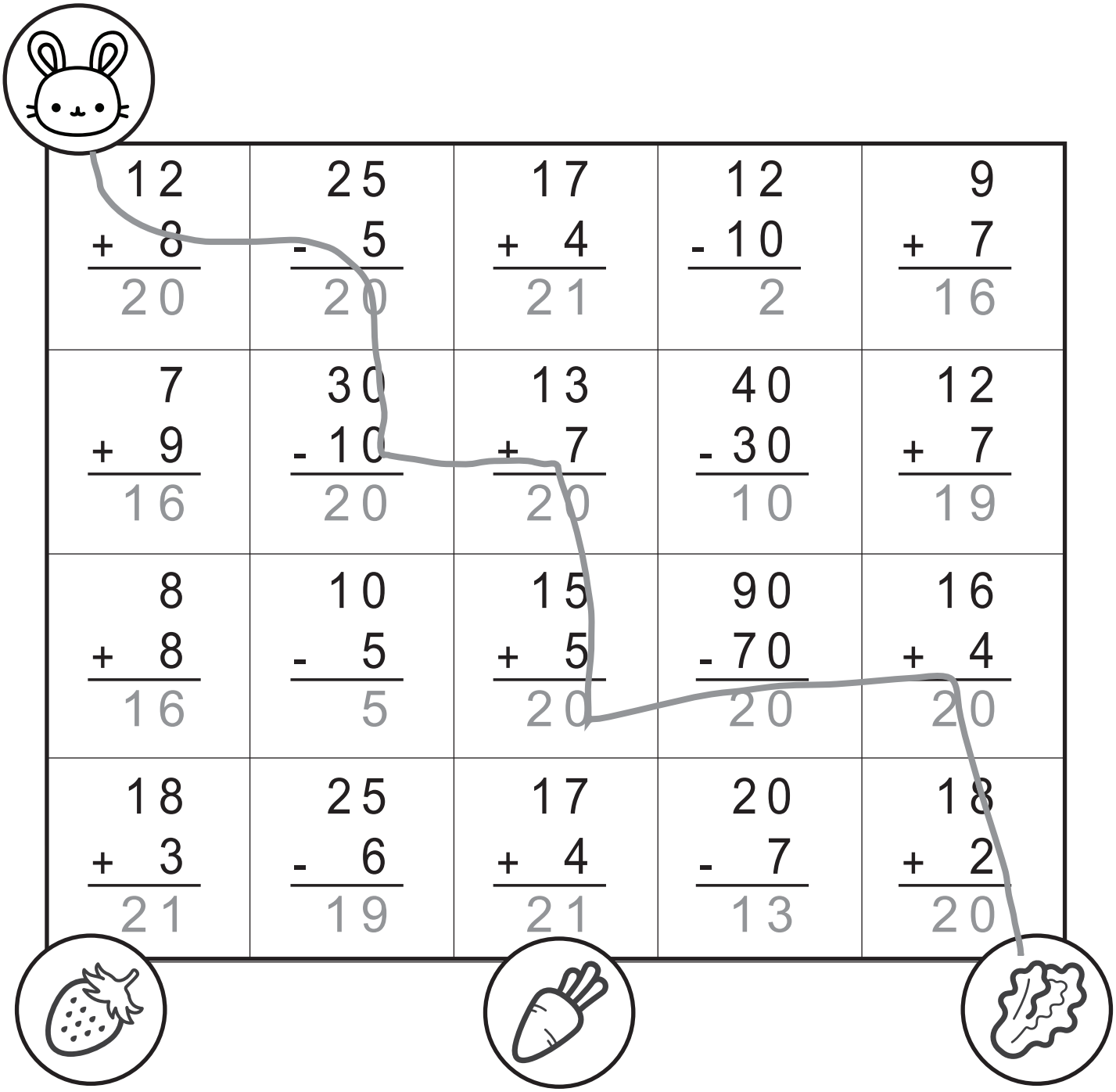
9 - 3 = 6

8 - 2 = 6

Addition and Subtraction Maze: Answer is 20

What did the bunny have for lunch? Find a path through the maze to find out!

Answer all the addition and subtraction questions below, and **find a path through squares that has an answer of 20.**



12 + 8 = 20	25 - 5 = 20	17 + 4 = 21	12 - 10 = 2	9 + 7 = 16
7 + 9 = 16	30 - 10 = 20	13 + 7 = 20	40 - 30 = 10	12 + 7 = 19
8 + 8 = 16	10 - 5 = 5	15 + 5 = 20	90 - 70 = 20	16 + 4 = 20
18 + 3 = 21	25 - 6 = 19	17 + 4 = 21	20 - 7 = 13	18 + 2 = 20

Balance the Equations

Fill in the numbers to make each equation true.

$8 + 2 = 1 + \boxed{9}$

10 = 10

$5 + 5 = 2 + \boxed{8}$

$7 + 3 = 4 + \boxed{6}$

$6 + 4 = \boxed{5} + 5$

$1 + 9 = \boxed{7} + 3$

$8 + 2 = \boxed{4} + 6$

$\boxed{3} + 7 = 8 + 2$

$\boxed{6} + 4 = 5 + 5$

$10 + \boxed{0} = 8 + 2$

$3 + \boxed{7} = 9 + 1$

$8 + \boxed{2} = 3 + 7$

Balance the Equations

Fill in the numbers to make each equation true.

$\boxed{8} + 7 = 10 + 5$

$15 = 15$

$5 + 8 = 6 + \boxed{7}$

$9 + 6 = 5 + \boxed{10}$

$3 + 4 = \boxed{5} + 2$

$2 + 9 = \boxed{7} + 4$

$8 + 4 = \boxed{6} + 6$

$\boxed{9} + 9 = 10 + 8$

$\boxed{10} + 6 = 5 + 11$

$10 + \boxed{8} = 9 + 9$

$3 + \boxed{11} = 7 + 7$

$12 + \boxed{3} = 7 + 8$

Adding 10, Subtracting 10

Add 10.

10	11	13	14	15
+ 10	+ 10	+ 10	+ 10	+ 10
20	21	23	24	25

30	40	50	60	70
+ 10	+ 10	+ 10	+ 10	+ 10
40	50	60	70	80

Subtract 10.

16	17	19	20	18
- 10	- 10	- 10	- 10	- 10
6	7	9	10	8

70	40	50	60	30
- 10	- 10	- 10	- 10	- 10
60	30	40	50	20

Hundreds, Tens, and Ones

Read the 3-digit number below.
Then answer the questions.

473

hundreds tens ones

473	How many hundreds?	4	tens?	7	ones?	3
623	How many hundreds?	6	tens?	2	ones?	3
250	How many hundreds?	2	tens?	5	ones?	0
835	How many hundreds?	8	tens?	3	ones?	5
291	How many hundreds?	2	tens?	9	ones?	1
379	How many hundreds?	3	tens?	7	ones?	9
435	How many hundreds?	4	tens?	3	ones?	5
500	How many hundreds?	5	tens?	0	ones?	0

Hundreds, Tens, and Ones

For each number below, write down how many hundreds, tens and ones.
Then write its expanded form.

267

2 hundreds?
6 tens?
7 ones?

200 + 60 + 7 = 267

863

8 hundreds?
6 tens?
3 ones?

800 + 60 + 3 = 863

380

3 hundreds?
8 tens?
0 ones?

300 + 80 + 0 = 380

60

0 hundreds?
6 tens?
0 ones?

0 + 60 + 0 = 60

Adding 10, Subtracting 10

Add 10.

56 + 10 = 66

2 + 10 = 12

83 + 10 = 93

25 + 10 = 35

210 + 10 = 220

776 + 10 = 786

133 + 10 = 143

859 + 10 = 869

Subtract 10.

20 - 10 = 10

15 - 10 = 5

36 - 10 = 26

70 - 10 = 60

731 - 10 = 721

572 - 10 = 562

623 - 10 = 613

299 - 10 = 289

Adding Tens and Ones

Add the ones

$$\begin{array}{r} 26 \\ +\ 31 \\ \hline 7 \end{array}$$

Then add the tens

$$\begin{array}{r} 26 \\ +\ 31 \\ \hline 57 \end{array}$$

Your turn to try!

$$\begin{array}{r} 26 \\ +\ 31 \\ \hline 57 \end{array} \qquad \begin{array}{r} 64 \\ +\ 4 \\ \hline 68 \end{array}$$

$$\begin{array}{r} 13 \\ +\ 5 \\ \hline 18 \end{array} \qquad \begin{array}{r} 11 \\ +\ 6 \\ \hline 17 \end{array} \qquad \begin{array}{r} 15 \\ +\ 12 \\ \hline 27 \end{array} \qquad \begin{array}{r} 25 \\ +\ 14 \\ \hline 39 \end{array} \qquad \begin{array}{r} 32 \\ +\ 46 \\ \hline 78 \end{array}$$

$$\begin{array}{r} 46 \\ +\ 13 \\ \hline 59 \end{array} \qquad \begin{array}{r} 56 \\ +\ 23 \\ \hline 79 \end{array} \qquad \begin{array}{r} 67 \\ +\ 31 \\ \hline 98 \end{array} \qquad \begin{array}{r} 25 \\ +\ 61 \\ \hline 86 \end{array} \qquad \begin{array}{r} 36 \\ +\ 42 \\ \hline 78 \end{array}$$

$$\begin{array}{r} 52 \\ +\ 26 \\ \hline 78 \end{array} \qquad \begin{array}{r} 74 \\ +\ 23 \\ \hline 97 \end{array} \qquad \begin{array}{r} 53 \\ +\ 16 \\ \hline 69 \end{array} \qquad \begin{array}{r} 45 \\ +\ 42 \\ \hline 87 \end{array} \qquad \begin{array}{r} 33 \\ +\ 46 \\ \hline 79 \end{array}$$

$$\begin{array}{r} 12 \\ +\ 13 \\ \hline 25 \end{array} \qquad \begin{array}{r} 38 \\ +\ 41 \\ \hline 79 \end{array} \qquad \begin{array}{r} 63 \\ +\ 15 \\ \hline 78 \end{array} \qquad \begin{array}{r} 27 \\ +\ 41 \\ \hline 68 \end{array} \qquad \begin{array}{r} 82 \\ +\ 13 \\ \hline 95 \end{array}$$

Subtracting Tens and Ones

Subtract the ones

$$\begin{array}{r} 46 \\ -\ 31 \\ \hline 5 \end{array}$$

Then subtract the tens

$$\begin{array}{r} 46 \\ -\ 31 \\ \hline 15 \end{array}$$

Your turn to try!

$$\begin{array}{r} 46 \\ -\ 31 \\ \hline 15 \end{array} \qquad \begin{array}{r} 64 \\ -\ 4 \\ \hline 60 \end{array}$$

$$\begin{array}{r} 17 \\ -\ 5 \\ \hline 12 \end{array} \qquad \begin{array}{r} 28 \\ -\ 6 \\ \hline 22 \end{array} \qquad \begin{array}{r} 25 \\ -\ 12 \\ \hline 13 \end{array} \qquad \begin{array}{r} 15 \\ -\ 14 \\ \hline 1 \end{array} \qquad \begin{array}{r} 46 \\ -\ 32 \\ \hline 14 \end{array}$$

$$\begin{array}{r} 32 \\ -\ 11 \\ \hline 21 \end{array} \qquad \begin{array}{r} 56 \\ -\ 23 \\ \hline 33 \end{array} \qquad \begin{array}{r} 67 \\ -\ 31 \\ \hline 36 \end{array} \qquad \begin{array}{r} 25 \\ -\ 11 \\ \hline 14 \end{array} \qquad \begin{array}{r} 76 \\ -\ 42 \\ \hline 34 \end{array}$$

$$\begin{array}{r} 57 \\ -\ 47 \\ \hline 10 \end{array} \qquad \begin{array}{r} 76 \\ -\ 25 \\ \hline 51 \end{array} \qquad \begin{array}{r} 89 \\ -\ 16 \\ \hline 73 \end{array} \qquad \begin{array}{r} 45 \\ -\ 42 \\ \hline 3 \end{array} \qquad \begin{array}{r} 99 \\ -\ 46 \\ \hline 53 \end{array}$$

$$\begin{array}{r} 19 \\ -\ 13 \\ \hline 6 \end{array} \qquad \begin{array}{r} 78 \\ -\ 41 \\ \hline 37 \end{array} \qquad \begin{array}{r} 68 \\ -\ 15 \\ \hline 53 \end{array} \qquad \begin{array}{r} 84 \\ -\ 72 \\ \hline 12 \end{array} \qquad \begin{array}{r} 85 \\ -\ 13 \\ \hline 72 \end{array}$$

Greater Than or Less Than?

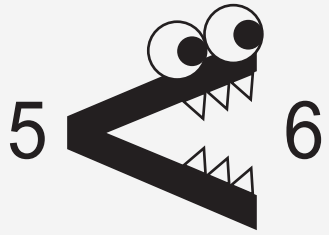
Use the symbol < or > to show if a number is less than or greater than the other number.

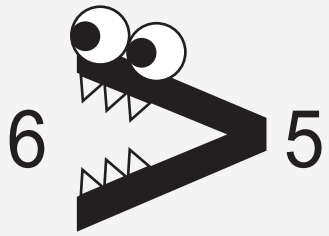
Examples:

5 < 6 means that 5 is less than 6

6 > 5 means that 6 is greater than 5

Tip: the open mouth of the symbol wants to eat the bigger number!





3 < 10

2 < 8

9 > 8

0 < 1

9 > 6

10 < 12

11 > 9

80 > 30

10 < 100

76 > 67

11 < 22

99 > 98

Adding Tens and Ones with Regrouping (Carrying)

Add the ones
7 + 7 = 14
Regroup 14 ones
as 1 ten and 4 ones

```
  1
  2 7
+   7
-----
    4
```

Then add the tens
1 + 2 = 3 tens

```
  1
  2 7
+   7
-----
  3 4
```

Your turn!

```
  2 7
+   7
-----
  3 4
```

```
  2 8
+   5
-----
  3 3
```

```
  1 6
+   6
-----
  2 2
```

```
  1 5
+ 1 9
-----
  3 4
```

```
  2 5
+ 3 7
-----
  6 2
```

```
  3 2
+ 4 8
-----
  8 0
```

```
  4 6
+ 2 5
-----
  9 1
```

```
  3 9
+ 2 3
-----
  6 2
```

```
  6 7
+ 2 7
-----
  9 4
```

```
  2 5
+ 4 9
-----
  6 4
```

```
  3 9
+ 4 2
-----
  8 1
```

```
  2 6
+ 4 7
-----
  7 3
```

```
  5 9
+ 2 5
-----
  8 4
```

```
  2 7
+ 3 8
-----
  6 5
```

```
  1 5
+ 7 7
-----
  9 2
```

```
  3 3
+ 4 7
-----
  8 0
```

```
  1 8
+ 2 3
-----
  4 1
```

```
  3 7
+ 4 9
-----
  8 6
```

```
  4 6
+ 1 5
-----
  6 1
```

```
  2 7
+ 6 4
-----
  9 1
```

```
  6 8
+ 1 3
-----
  8 1
```

Adding Three 2-Digit Numbers with Regrouping (Carrying)

The same rules apply when you add three numbers.

Add the ones
7 + 3 + 2 = 12
Regroup 12 ones
as 1 ten and 2 ones

$$\begin{array}{r} {\scriptstyle 1} \\ 27 \\ 23 \\ +\ 32 \\ \hline 2 \end{array}$$

Then add the tens
1 + 2 + 2 + 3 = 8 tens

$$\begin{array}{r} {\scriptstyle 1} \\ 27 \\ 23 \\ +\ 32 \\ \hline 82 \end{array}$$

Now your turn!

$$\begin{array}{r} 23 \\ 15 \\ +\ 35 \\ \hline 73 \end{array} \qquad \begin{array}{r} 10 \\ 23 \\ +\ 47 \\ \hline 80 \end{array} \qquad \begin{array}{r} 59 \\ 23 \\ +\ 12 \\ \hline 94 \end{array} \qquad \begin{array}{r} 42 \\ 15 \\ +\ 24 \\ \hline 81 \end{array}$$

$$\begin{array}{r} 34 \\ 25 \\ +\ 16 \\ \hline 75 \end{array} \qquad \begin{array}{r} 21 \\ 57 \\ +\ 12 \\ \hline 90 \end{array} \qquad \begin{array}{r} 19 \\ 42 \\ +\ 21 \\ \hline 82 \end{array} \qquad \begin{array}{r} 35 \\ 48 \\ +\ 12 \\ \hline 95 \end{array}$$

Number Order

Put the numbers in order from least to greatest.

35 28 75 15 82

15 28 35 75 82

19 83 40 25 16

16 19 25 40 83

76 60 37 10 36

10 36 37 60 76

86 32 67 20 45

20 32 45 67 86

63 95 46 82 12

12 46 63 82 95

Adding 100, Subtracting 100

Add 100.

256 + 100 = 356

120 + 100 = 220

680 + 100 = 780

359 + 100 = 459

200 + 100 = 300

268 + 100 = 368

356 + 100 = 456

750 + 100 = 850

Subtract 100.

243 - 100 = 143

650 - 100 = 550

680 - 100 = 580

359 - 100 = 259

200 - 100 = 100

268 - 100 = 168

356 - 100 = 256

750 - 100 = 650

Subtracting Tens and Ones with Regrouping (Borrowing)

Subtract the ones.
3 is smaller than 7
so **regroup**!

43 is 4 tens and 3 ones.
Regroup as 3 tens and
13 ones. 13 - 7 = 6

3 13
~~4~~ ~~3~~
- 1 7
6

Then subtract the tens.
3 - 1 = 2 tens

3 13
~~4~~ ~~3~~
- 1 7
2 6

Your turn!

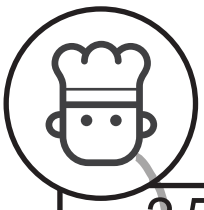
4 3
- 1 7
2 6

4 3 - 2 5 1 8	6 4 - 2 8 3 6	5 5 - 3 7 1 8	4 0 - 1 4 2 6	6 0 - 4 6 1 4
3 2 - 1 3 1 9	5 3 - 2 6 2 7	6 1 - 3 7 2 4	4 2 - 2 5 1 7	8 1 - 4 6 3 5
5 2 - 4 7 5	7 4 - 2 5 4 9	8 3 - 1 6 6 7	7 7 - 4 9 2 8	9 2 - 3 6 5 6
7 0 - 2 5 4 5	9 6 - 4 8 4 8	6 3 - 1 5 4 8	5 7 - 2 9 2 8	8 0 - 1 5 6 5

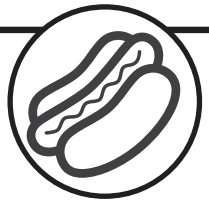
Addition and Subtraction Maze: Answer is 50

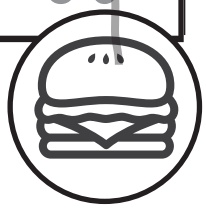
What did the chef make for dinner? Find a path through the maze to find out!

Answer all the addition and subtraction questions below, and **find a path through squares that has an answer of 50.**



25 + 25 = 50	38 + 12 = 50	23 + 9 = 32	26 + 19 = 45	70 - 10 = 60	30 - 20 = 10
47 + 13 = 60	80 - 30 = 50	23 + 27 = 50	34 + 16 = 50	34 + 37 = 71	17 + 18 = 35
65 - 25 = 40	25 - 25 = 0	50 - 25 = 25	47 + 3 = 50	58 + 17 = 75	70 - 15 = 55
37 + 3 = 40	75 + 25 = 100	99 - 39 = 60	68 - 18 = 50	89 - 39 = 50	19 + 31 = 50
37 + 23 = 60	66 - 17 = 49	27 + 33 = 60	37 + 23 = 60	37 + 27 = 64	21 + 29 = 50





Adding Hundreds, Tens and Ones

Add the ones

```
  126
+ 231
-----
    7
```

Next add the tens

```
  126
+ 231
-----
   57
```

Then add the hundreds

```
  126
+ 231
-----
  357
```

```
  126
+ 231
-----
  357
```

```
  137
+ 352
-----
  489
```

```
  856
+ 142
-----
  998
```

```
  465
+ 232
-----
  697
```

```
  547
+ 241
-----
  788
```

```
  632
+  57
-----
  689
```

```
  250
+ 125
-----
  375
```

```
  135
+  42
-----
  177
```

```
  111
+ 456
-----
  567
```

```
  750
+ 225
-----
  975
```

```
  155
+ 431
-----
  586
```

```
  629
+ 130
-----
  759
```

Adding Three-Digit Numbers: Regrouping (Carrying)

Add the ones

```
  1
  3 8 6
+ 2 2 6
-------
      2
```

Next add the tens

```
  1 1
  3 8 6
+ 2 2 6
-------
    1 2
```

Then add the hundreds

```
  1 1
  3 8 6
+ 2 2 6
-------
  6 1 2
```

```
  386
+ 226
-----
  612
```

```
  347
+ 383
-----
  730
```

```
  756
+ 167
-----
  923
```

```
  665
+ 236
-----
  901
```

```
  767
+ 143
-----
  910
```

```
  329
+ 282
-----
  611
```

```
  750
+ 150
-----
  900
```

```
  345
+ 225
-----
  670
```

```
  275
+ 487
-----
  762
```

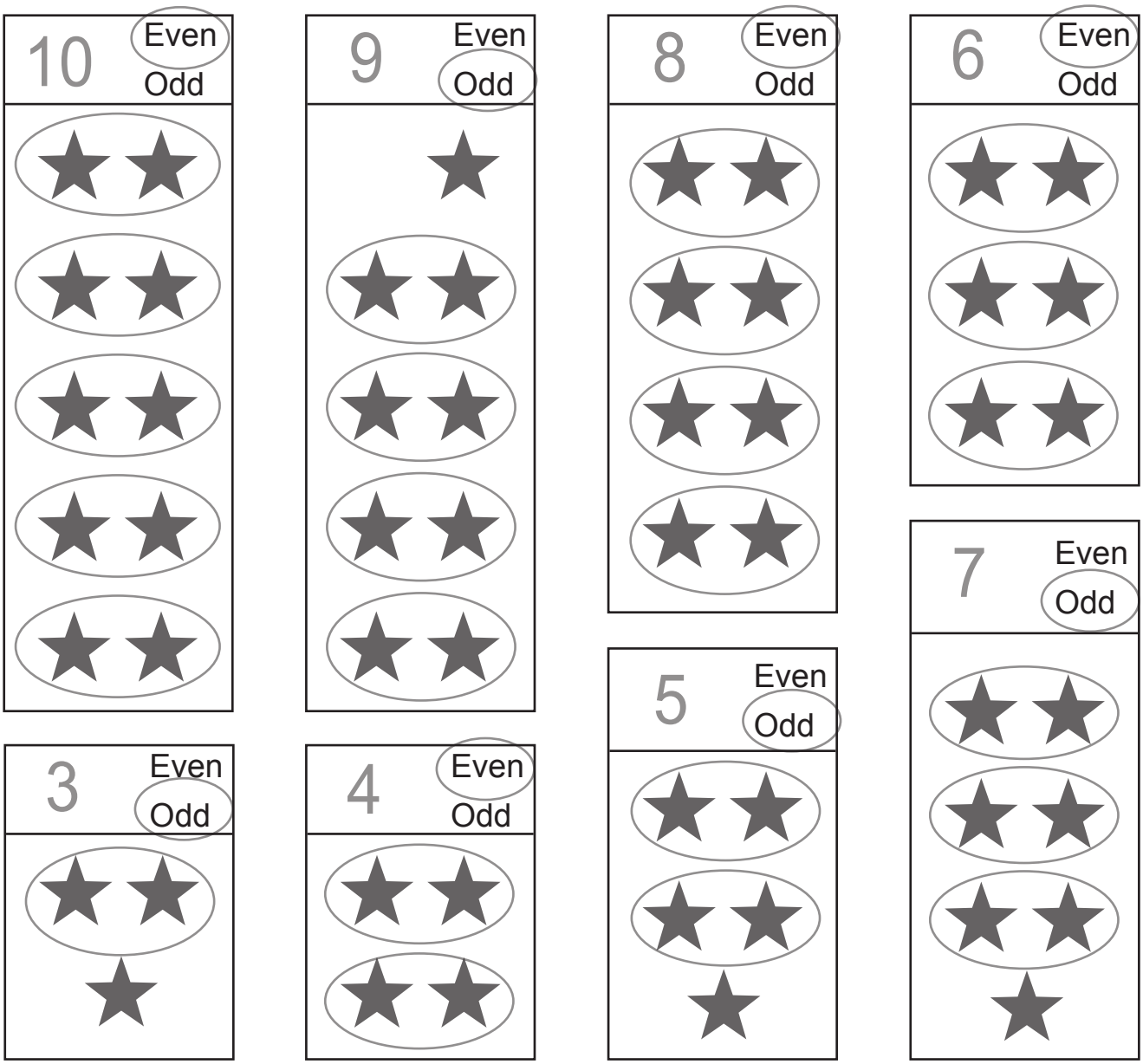
```
  146
+  76
-----
  222
```

```
  468
+ 332
-----
  800
```

```
  597
+  37
-----
  634
```

Odd or Even?

- Count the number of stars in each box. Write the number at the top.
- Circle groups of 2 stars in each box. If all the stars are circled, the number is even. If there is a star left and not circled, the number is odd.
- Circle “Even” or “Odd” at the top.



Circle the Even Numbers

1	2	3	4	5	6	7	8	9	10

Adding Three 2-Digit Numbers with Regrouping (Carrying)

Sometimes when you add 2-digit numbers, the total becomes a 3-digit number.

Add the ones	Next add the tens	Then add the hundreds
1	1 1	1 1
2 7	2 7	2 7
5 3	5 3	5 3
+ 3 2	+ 3 2	+ 3 2
2	1 2	1 1 2

4 6	2 7	1 2	6 7
8 2	4 8	3 4	8 9
+ 3 1	+ 6 2	+ 5 6	+ 1 1
1 5 9	1 3 7	1 0 2	1 6 7

5 9	9 3	7 8	3 8
3 1	6 5	3 4	4 9
+ 4 5	+ 5 2	+ 5 1	+ 5 5
1 3 5	2 1 0	1 6 3	1 4 2

Subtracting Hundreds, Tens and Ones

Subtract the ones

```
  546
- 231
-----
    5
```

Next subtract the tens

```
  546
- 231
-----
   15
```

Then subtract the hundreds

```
  546
- 231
-----
  315
```

```
  546
- 231
-----
  315
```

```
  983
- 352
-----
  631
```

```
  856
- 142
-----
  714
```

```
  765
- 232
-----
  533
```

```
  547
- 241
-----
  306
```

```
  568
- 357
-----
  211
```

```
  257
- 125
-----
  132
```

```
  758
- 342
-----
  416
```

```
  758
- 456
-----
  302
```

```
  358
- 225
-----
  133
```

```
  687
- 431
-----
  256
```

```
  829
- 120
-----
  709
```

Subtracting Three-Digit Numbers: Regrouping (Borrowing)

Subtract the ones

$$\begin{array}{r} 3\,\overset{7}{\cancel{8}}\,\overset{15}{\cancel{5}} \\ -\ 2\,2\,7 \\ \hline 8 \end{array}$$

Next subtract the tens

$$\begin{array}{r} 3\,\overset{7}{\cancel{8}}\,\overset{15}{\cancel{5}} \\ -\ 2\,2\,7 \\ \hline 5\,8 \end{array}$$

Then subtract the hundreds

$$\begin{array}{r} 3\,\overset{7}{\cancel{8}}\,\overset{15}{\cancel{5}} \\ -\ 2\,2\,7 \\ \hline 1\,5\,8 \end{array}$$

$$\begin{array}{r} 385 \\ -\ 227 \\ \hline 158 \end{array} \qquad \begin{array}{r} 541 \\ -\ 383 \\ \hline 158 \end{array} \qquad \begin{array}{r} 756 \\ -\ 597 \\ \hline 159 \end{array} \qquad \begin{array}{r} 465 \\ -\ 236 \\ \hline 229 \end{array}$$

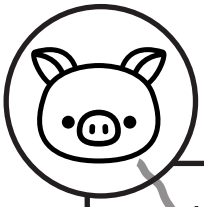
$$\begin{array}{r} 747 \\ -\ 249 \\ \hline 498 \end{array} \qquad \begin{array}{r} 829 \\ -\ 682 \\ \hline 147 \end{array} \qquad \begin{array}{r} 750 \\ -\ 159 \\ \hline 591 \end{array} \qquad \begin{array}{r} 412 \\ -\ 225 \\ \hline 187 \end{array}$$

$$\begin{array}{r} 275 \\ -\ 87 \\ \hline 188 \end{array} \qquad \begin{array}{r} 946 \\ -\ 776 \\ \hline 170 \end{array} \qquad \begin{array}{r} 661 \\ -\ 282 \\ \hline 379 \end{array} \qquad \begin{array}{r} 246 \\ -\ 198 \\ \hline 48 \end{array}$$

Addition and Subtraction Maze: Answer is 500

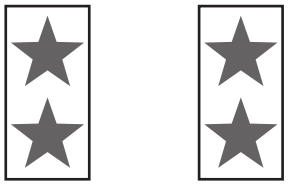
What did Piggy eat for dessert? Find a path through the maze to find out!

Answer all the addition and subtraction questions below, and **find a path through squares that has an answer of 500.**



142 + 358 = 500	225 + 275 = 500	167 + 346 = 513	675 - 275 = 400	427 + 123 = 550
333 + 168 = 501	125 + 375 = 500	167 + 346 = 513	675 - 275 = 400	427 + 123 = 550
267 + 289 = 556	320 + 180 = 500	550 - 50 = 500	765 - 275 = 490	867 - 456 = 411
568 - 168 = 400	900 - 550 = 350	360 + 140 = 500	950 - 275 = 675	950 - 550 = 400

Repeated Addition with 2's -- Beginning Multiplication

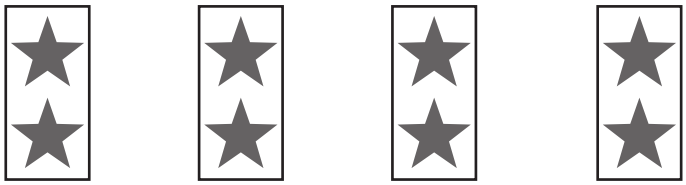


2 + 2 = 4

2 groups of stars, with 2 stars in each group. 2 x 2 = 4

2 + 2 + 2 = 6

3 groups of stars, with 2 stars in each group. 3 x 2 = 6



2 + 2 + 2 + 2 = 8

4 groups of stars, with 2 stars in each group. 4 x 2 = 8

Repeated Addition with 2's -- Beginning Multiplication

2 + 2 + 2 + 2 + 2 = 10

5 groups of stars, with 2 stars in each group. 5 x 2 = 10

---

2 + 2 = 4 2 x 2 = 4

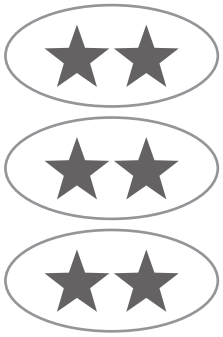
2 + 2 + 2 = 6 3 x 2 = 6

2 + 2 + 2 + 2 = 8 4 x 2 = 8

2 + 2 + 2 + 2 + 2 = 10 5 x 2 = 10

Commutative Property of Multiplication: 3 x 2 = 2 x 3

You can multiply numbers in any order and get the same answer.
That is the commutative property of multiplication.



3 x 2 = 6

2 x 3 = 6

4 x 2 = 8

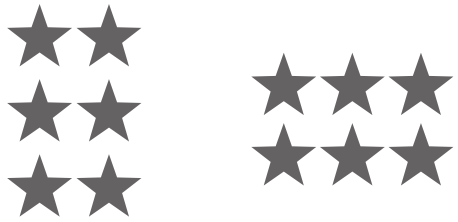
2 x 4 = 8

5 x 2 = 10

2 x 5 = 10

Commutative Property of Multiplication: 3 x 2 = 2 x 3

You can multiply numbers in any order and get the same answer.
That is the commutative property of multiplication.



3 x 2 = 2 x 3

Fill in the missing number:

3 x 2 = 2 x [3]

4 x 2 = 2 x [4]

2 x 2 = [2] x 2

1 x 2 = [2] x 1

[5] x 2 = 2 x 5

3 x 2 = [6] 2 x 3 = [6]

4 x 2 = [8] 2 x 4 = [8]

2 x 2 = [4] 2 x 2 = [4]

1 x 2 = [2] 2 x 1 = [2]

5 x 2 = [10] 2 x 5 = [10]

Multiply by 2

Tip: When you multiply by 2, the answer is always double the other number.

★★
★★

2 x 2 = 4

★★★
★★★

2 x 3 = 6

★★★★
★★★★

2 x 4 = 8

★★★★★
★★★★★

2 x 5 = 10

★★★★★★
★★★★★★

2 x 6 = 12

★★★★★★★
★★★★★★★

2 x 7 = 14

★★★★★★★★
★★★★★★★★

2 x 8 = 16

★★★★★★★★★
★★★★★★★★★

2 x 9 = 18

Multiply by 1, Multiply by 0

Multiply by 1: When you multiply by 1, the answer is always the other number. This is known as the identity property of multiplication.

Example: 3 groups of stars, with 1 star in each group. You have 3 stars total.

3 x 1 = 3

3 x 1 = 3

7 x 1 = 7

8 x 1 = 8

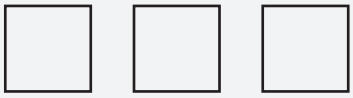
1 x 6 = 6

10 x 1 = 10

100 x 1 = 100

Multiply by 0: When you multiply by 0, the answer is always 0.

Example: 3 groups of stars, with 0 star in each group. You have 0 stars total.



3 x 0 = 0

0 x 3 = 0

9 x 0 = 0

5 x 0 = 0

0 x 12 = 0

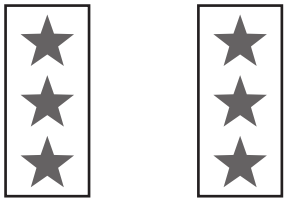
0 x 100 = 0

200 x 0 = 0

Multiplication Practice: 1 and 2

When you multiply by 1, the answer is always the other number.
When you multiply by 2, the answer is always double the other number.

1 x 1 = 1	2 x 1 = 2
1 x 2 = 2	2 x 2 = 4
1 x 3 = 3	2 x 3 = 6
1 x 4 = 4	2 x 4 = 8
1 x 5 = 5	2 x 5 = 10
1 x 6 = 6	2 x 6 = 12
1 x 7 = 7	2 x 7 = 14
1 x 8 = 8	2 x 8 = 16
1 x 9 = 9	2 x 9 = 18
1 x 10 = 10	2 x 10 = 20

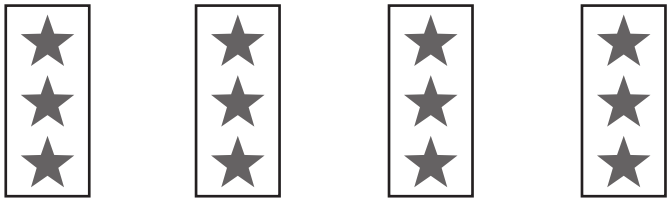


3 + 3 = 6

2 groups of stars, with 3 stars in each group. 2 x 3 = 6

3 + 3 + 3 = 9

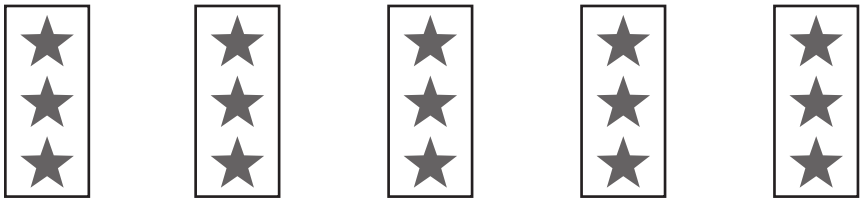
3 groups of stars, with 3 stars in each group. 3 x 3 = 9



3 + 3 + 3 + 3 = 12

4 groups of stars, with 3 stars in each group. 4 x 3 = 12

Repeated Addition with 3's -- Beginning Multiplication



3 + 3 + 3 + 3 + 3 = 15

5 groups of stars, with 3 stars in each group. 5 x 3 = 15

---

3 + 3 = 6 2 x 3 = 6

3 + 3 + 3 = 9 3 x 3 = 9

3 + 3 + 3 + 3 = 12 4 x 3 = 12

3 + 3 + 3 + 3 + 3 = 15 5 x 3 = 15

Commutative Property of Multiplication: 4 x 3 = 3 x 4

You can multiply numbers in any order and get the same answer.
That is the commutative property of multiplication.

4 x 3 = 3 x 4

Fill in the missing number:

2 x 3 = 3 x [2]

3 x 3 = 3 x [3]

4 x 3 = [3] x 4

5 x 3 = [3] x 5

[1] x 3 = 3 x 1

2 x 3 = [6] 3 x 2 = [6]

3 x 3 = [9] 3 x 3 = [9]

4 x 3 = [12] 3 x 4 = [12]

5 x 3 = [15] 3 x 5 = [15]

1 x 3 = [3] 3 x 1 = [3]

Multiply by 3

Tip: Use the number line below to help you find the answer.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

3 x 2 = 6

3 x 3 = 9

3 x 4 = 12

3 x 5 = 15

3 x 6 = 18

3 x 7 = 21

3 x 8 = 24

3 x 9 = 27

Multiplication Practice: 3

First count by 3's, then practice multiplying by 3.

Count by 3's

3	★★★
6	★★★
9	★★★
12	★★★
15	★★★
18	★★★
21	★★★
24	★★★
27	★★★
30	★★★

3 x 1 = 3

3 x 2 = 6

3 x 3 = 9

3 x 4 = 12

3 x 5 = 15

3 x 6 = 18

3 x 7 = 21

3 x 8 = 24

3 x 9 = 27

3 x 10 = 30

3 x 2 = 6

3 x 7 = 21

4 x 3 = 12

3 x 8 = 24

0 x 3 = 0

3 x 5 = 15

5 x 3 = 15

3 x 6 = 18

6 x 3 = 18

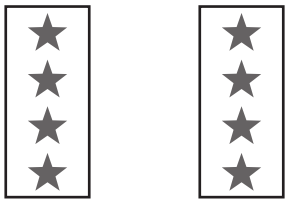
3 x 9 = 27

Review of Multiplying by 0, 1, 2, and 3

This is a review of questions you have answered already in the previous pages.

2 x 2 = 4	2 x 3 = 6	1 x 1 = 1
3 x 2 = 6	3 x 1 = 3	3 x 3 = 9
1 x 3 = 3	1 x 3 = 3	3 x 4 = 12
2 x 4 = 8	2 x 5 = 10	2 x 8 = 16
1 x 0 = 0	5 x 0 = 0	1 x 5 = 5
5 x 3 = 15	4 x 3 = 12	0 x 3 = 0
3 x 7 = 21	3 x 6 = 18	3 x 5 = 15
2 x 6 = 12	2 x 4 = 8	2 x 7 = 14

Repeated Addition with 4's -- Beginning Multiplication

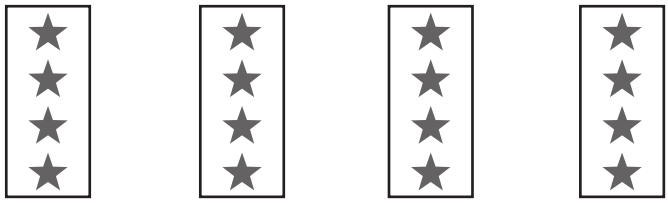


4 + 4 = 8

2 groups of stars, with 4 stars in each group. 2 x 4 = 8

4 + 4 + 4 = 12

3 groups of stars, with 4 stars in each group. 3 x 4 = 12



4 + 4 + 4 + 4 = 16

4 groups of stars, with 4 stars in each group. 4 x 4 = 16

Repeated Addition with 4's -- Beginning Multiplication

4 + 4 + 4 + 4 + 4 = 20

5 groups of stars, with 4 stars in each group. 5 x 4 = 20

---

4 + 4 = 8 2 x 4 = 8

4 + 4 + 4 = 12 3 x 4 = 12

4 + 4 + 4 + 4 = 16 4 x 4 = 16

4 + 4 + 4 + 4 + 4 = 20 5 x 4 = 20

Multiplication Practice: 4

First count by 4's, then practice multiplying by 4.

Count by 4's

4	★★★★
8	★★★★
12	★★★★
16	★★★★
20	★★★★
24	★★★★
28	★★★★
32	★★★★
36	★★★★
40	★★★★

4 x 1 = 4

4 x 2 = 8

4 x 3 = 12

4 x 4 = 16

4 x 5 = 20

4 x 6 = 24

4 x 7 = 28

4 x 8 = 32

4 x 9 = 36

4 x 10 = 40

4 x 2 = 8

4 x 7 = 28

4 x 4 = 16

4 x 8 = 32

0 x 4 = 0

4 x 5 = 20

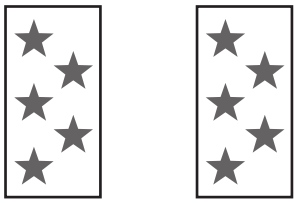
5 x 4 = 20

4 x 6 = 24

6 x 4 = 24

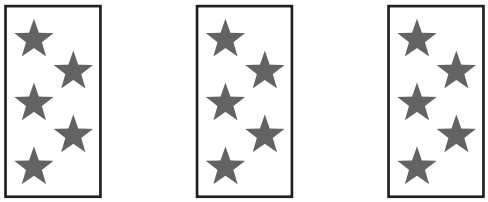
4 x 9 = 36

Repeated Addition with 5's -- Beginning Multiplication



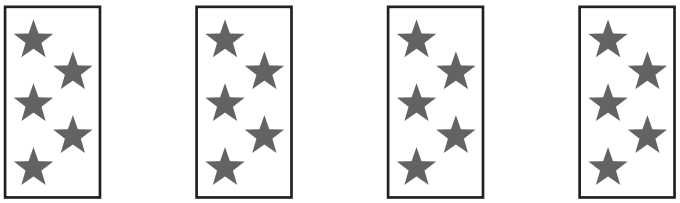
5 + 5 = 10

2 groups of stars, with 5 stars in each group. 2 x 5 = 10



5 + 5 + 5 = 15

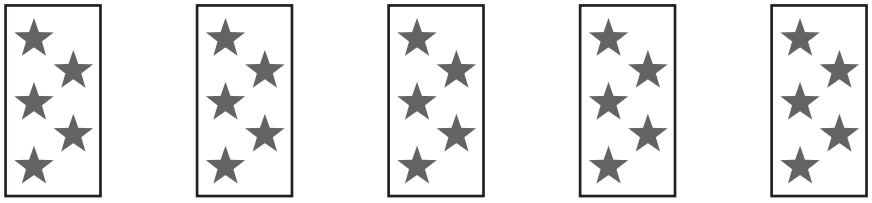
3 groups of stars, with 5 stars in each group. 3 x 5 = 15



5 + 5 + 5 + 5 = 20

4 groups of stars, with 5 stars in each group. 4 x 5 = 20

Repeated Addition with 5's -- Beginning Multiplication



5 + 5 + 5 + 5 + 5 = 25

5 groups of stars, with 5 stars in each group. 5 x 5 = 25

---

5 + 5 = 10 2 x 5 = 10

5 + 5 + 5 = 15 3 x 5 = 15

5 + 5 + 5 + 5 = 20 4 x 5 = 20

5 + 5 + 5 + 5 + 5 = 25 5 x 5 = 25

Multiply by 5

Tip: When you multiply by 5, the answer always ends in 0 or 5.

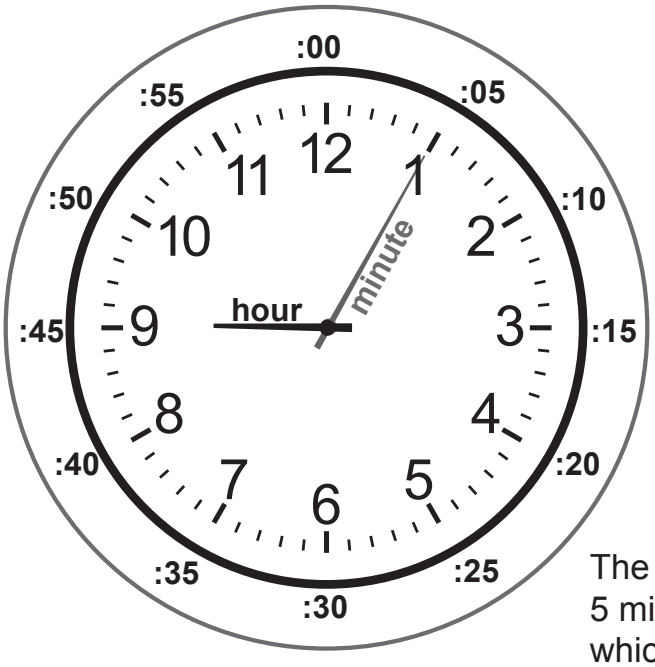
5 x 1 = 5	5 x 9 = 45
5 x 2 = 10	5 x 10 = 50
5 x 3 = 15	5 x 11 = 55
5 x 4 = 20	5 x 12 = 60
5 x 5 = 25	5 x 0 = 0
5 x 6 = 30	5 x 2 = 10
5 x 7 = 35	5 x 4 = 20
5 x 8 = 40	5 x 6 = 30

Count by 5's

5
10
15
20
25
30
35
40
45
50

Telling Time

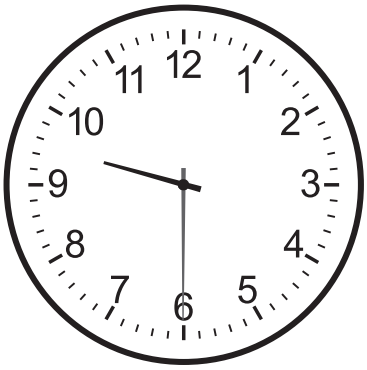
- There are 60 minutes in an hour.
- When the minute hand is pointing at the 12, it represents 0 minutes.
- When the minute hand is pointing at the 1, it is 5 minutes past the hour. When minute hand is pointing at 2, it is 10 minutes past the hour.
- Knowing multiples of 5 will help you tell time quickly.



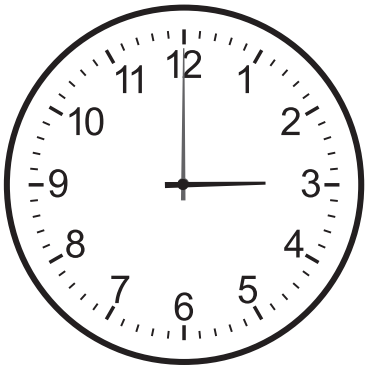
The clock here is showing 5 minutes past 9 o'clock, which is written as 9:05.

9:05

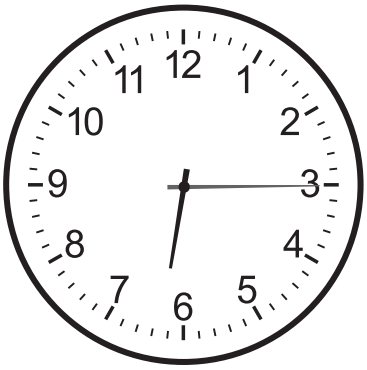
Read the clocks below and write down the times underneath.



9:30



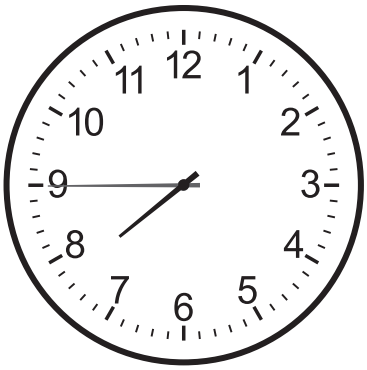
3:00



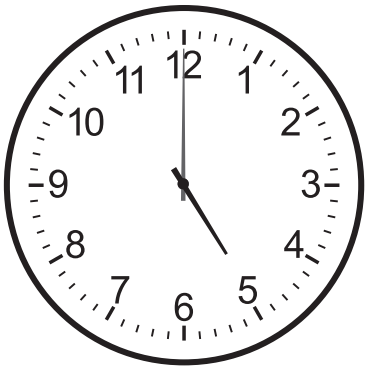
6:15

Telling Time

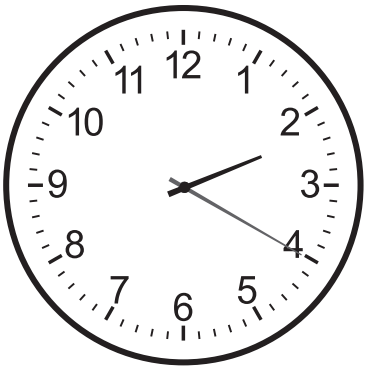
Read the clocks below and write down the times underneath.



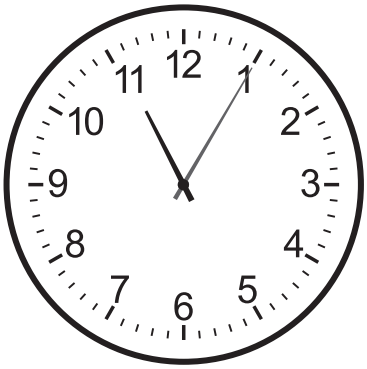
7:45



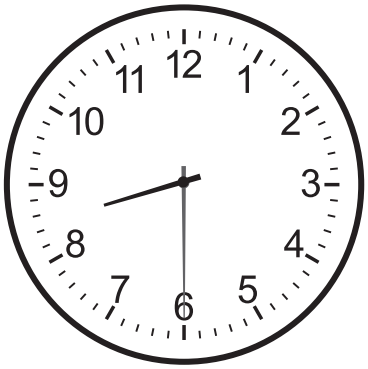
5:00



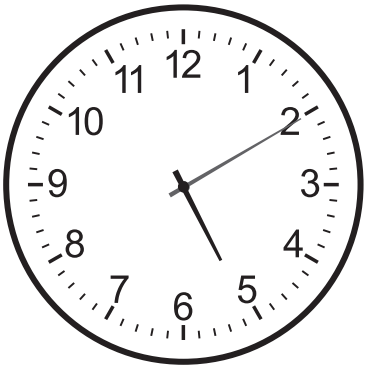
2:20



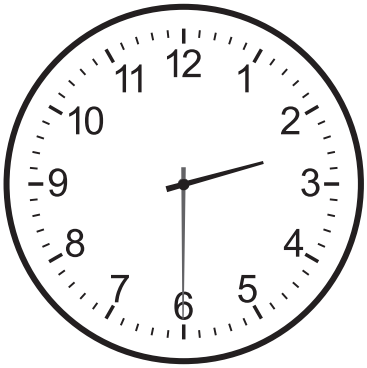
11:10



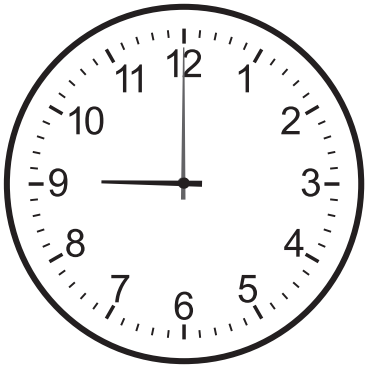
8:30



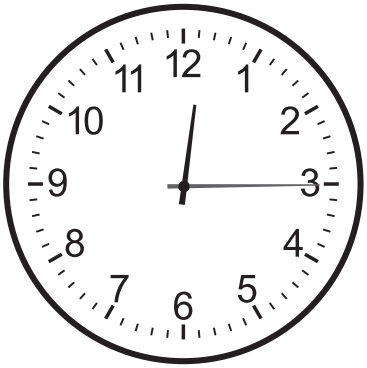
5:10



2:30



9:00



12:15

Review of Multiplying by 4 and 5

This is a review of questions you have answered earlier in the previous pages.

4 x 2 = 8	2 x 4 = 8	5 x 4 = 20
3 x 4 = 12	5 x 2 = 10	5 x 5 = 25
4 x 3 = 12	5 x 3 = 15	4 x 6 = 24
5 x 4 = 20	4 x 5 = 20	5 x 6 = 30
5 x 0 = 0	4 x 7 = 28	5 x 8 = 40
5 x 5 = 25	5 x 7 = 35	4 x 8 = 32
4 x 6 = 24	6 x 4 = 24	4 x 9 = 36
5 x 6 = 30	2 x 4 = 8	2 x 7 = 14

Multiply by 10

Multiplying by 10? Put a zero after it! Example: 10 x **3** = **30**

10 x 1 = 10

10 x 2 = 20

10 x 3 = 30

10 x 4 = 40

10 x 5 = 50

10 x 6 = 60

10 x 7 = 70

10 x 8 = 80

10 x 9 = 90

10 x 10 = 100

10 x 11 = 110

10 x 20 = 200

10 x 25 = 250

10 x 30 = 300

10 x 3 = 30

10 x 50 = 500

Count by 10's

10
20
30
40
50
60
70
80
90
100

Count by Twos

2	4	6	8	10	12	14	16	18	20

Count by Threes

3	6	9	12	15	18	21	24	27	30

Count by Fours

4	8	12	16	20	24	28	32	36	40

Count by Fives

5	10	15	20	25	30	35	40	45	50

Count by Tens

10	20	30	40	50	60	70	80	90	100

Repeating Addition with 6's

As you can see below, writing 6x8 takes a lot less space than 6+6+6+6+6+6+6+6!

6 + 6 =	12	6 x 2 =	12
6 + 6 + 6 =	18	6 x 3 =	18
6 + 6 + 6 + 6 =	24	6 x 4 =	24
6 + 6 + 6 + 6 +6 =	30	6 x 5 =	30
6 + 6 + 6 + 6 + 6 + 6 =	36	6 x 6 =	36
6 + 6 + 6 + 6 + 6 + 6 + 6 =	42	6 x 7 =	42
6 + 6 + 6 + 6 + 6 + 6 + 6 + 6 =	48	6 x 8 =	48
6 + 6 + 6 + 6 + 6 + 6 + 6 + 6 + 6 =	54	6 x 9 =	54
		6 x 10 =	60

Multiply by 6

Fun Tip: When you multiply 6 by an even number, they both end in the same digit.
6×**2**=1**2**, 6×**4**=24, 6×**6**=3**6**

6 x 1 = 6	6 x 9 = 54
6 x 2 = 12	6 x 10 = 60
6 x 3 = 18	6 x 11 = 66
6 x 4 = 24	6 x 12 = 72
6 x 5 = 30	6 x 0 = 0
6 x 6 = 36	6 x 2 = 12
6 x 7 = 42	6 x 4 = 24
6 x 8 = 48	6 x 6 = 36

Count by 6's

6
12
18
24
30
36
42
48
54
60

Repeating Addition with 7's

Why was Six afraid of Seven? Because Seven ate Nine!

7 + 7 = 14	7 x 2 = 14
7 + 7 + 7 = 21	7 x 3 = 21
7 + 7 + 7 + 7 = 28	7 x 4 = 28
7 + 7 + 7 + 7 +7 = 35	7 x 5 = 35
7 + 7 + 7 + 7 + 7 + 7 = 42	7 x 6 = 42
7 + 7 + 7 + 7 + 7 + 7 + 7 = 49	7 x 7 = 49
7 + 7 + 7 + 7 + 7 + 7 + 7 + 7 = 56	7 x 8 = 56
7 + 7 + 7 + 7 + 7 + 7 + 7 + 7 + 7 = 63	7 x 9 = 63
	7 x 10 = 70

Multiply by 7

Here's a little trick to help you remember the 7 times table.
Write down 1-9 in three columns starting from top right:

7	**4**	**1**
8	**5**	**2**
9	**6**	**3**

This gives the last digit of the 7 times table in following order:

7 x 1 = **7**	7 x 2 = 1**4**	7 x 3 = 2**1**
7 x 4 = 2**8**	7 x 5 = 3**5**	7 x 6 = 4**2**
7 x 7 = 4**9**	7 x 8 = 5**6**	7 x 9 = 6**3**

Your turn to practice:

7 x 1 = 7	7 x 2 = 14	7 x 3 = 21
7 x 4 = 28	7 x 5 = 35	7 x 6 = 42
7 x 7 = 49	7 x 8 = 56	7 x 9 = 63

Multiply by 7

Tip: You can also use the commutative property to help you multiply by 7.

7 x 2 = 2 x 7 7 x 3 = 3 x 7 7 x 4 = 4 x 7 7 x 5 = 5 x 7 7 x 6 = 6 x 7

7 x 1 =	7	7 x 9 =	63
7 x 2 =	14	7 x 10 =	70
7 x 3 =	21	7 x 5 =	35
7 x 4 =	28	7 x 2 =	14
7 x 5 =	35	7 x 0 =	0
7 x 6 =	42	7 x 3 =	21
7 x 7 =	49	7 x 4 =	28
7 x 8 =	56	7 x 6 =	42

Count by 7's

7
14
21
28
35
42
49
56
63
70

Review of Multiplying by 6 and 7

This is a review of questions you have answered already in the previous pages.

7 x 2 = 14	6 x 3 = 18	5 x 6 = 30
6 x 4 = 24	7 x 2 = 14	7 x 5 = 35
7 x 3 = 21	6 x 3 = 18	6 x 5 = 30
6 x 4 = 24	4 x 7 = 28	5 x 7 = 35
6 x 1 = 6	6 x 7 = 42	7 x 8 = 56
6 x 5 = 30	7 x 7 = 49	6 x 8 = 48
5 x 7 = 35	7 x 4 = 28	7 x 9 = 63
7 x 6 = 42	6 x 6 = 36	6 x 9 = 54

Count by Sixes

6	12	18	24	30	36	42	48	54	60

Count by Sevens

7	14	21	28	35	42	49	56	63	70

Count by Eights

8	16	24	32	40	48	56	64	72	80

Count by Nines

9	18	27	36	45	54	63	72	81	90

Count by Hundreds

100	200	300	400	500	600	700	800	900	1000

Repeating Addition with 8's

Repeated addition will help you with your multiplication facts.
And multiplication facts will help you with repeated addition!

8 + 8 = 16	8 x 2 = 16
8 + 8 + 8 = 24	8 x 3 = 24
8 + 8 + 8 + 8 = 32	8 x 4 = 32
8 + 8 + 8 + 8 + 8 = 40	8 x 5 = 40
8 + 8 + 8 + 8 + 8 + 8 = 48	8 x 6 = 48
8 + 8 + 8 + 8 + 8 + 8 + 8 = 56	8 x 7 = 56
8 + 8 + 8 + 8 + 8 + 8 + 8 + 8 = 64	8 x 8 = 64
8 + 8 + 8 + 8 + 8 + 8 + 8 + 8 + 8 = 72	8 x 9 = 72
	8 x 10 = 80

Multiply by 8

Here's a tip to help you multiply by 8: Double, double, double!

Example: 8 x 3: double 3 is 6, double 6 is 12, double 12 is 24. 8 x 3 = 24

8 x 1 =	8	8 x 9 =	72
8 x 2 =	16	8 x 10 =	80
8 x 3 =	24	8 x 5 =	40
8 x 4 =	32	8 x 2 =	16
8 x 5 =	40	8 x 0 =	0
8 x 6 =	48	8 x 3 =	24
8 x 7 =	56	8 x 4 =	32
8 x 8 =	64	8 x 6 =	48

Count by 8's

8
16
24
32
40
48
56
64
72
80

Repeating Addition with 9's

Which one is faster? Adding all the 9's or multiplying by 9?

9 + 9 =	18	9 x 2 =	18
9 + 9 + 9 =	27	9 x 3 =	27
9 + 9 + 9 + 9 =	36	9 x 4 =	36
9 + 9 + 9 + 9 + 9 =	45	9 x 5 =	45
9 + 9 + 9 + 9 + 9 + 9 =	54	9 x 6 =	54
9 + 9 + 9 + 9 + 9 + 9 + 9 =	63	9 x 7 =	63
9 + 9 + 9 + 9 + 9 + 9 + 9 + 9 =	72	9 x 8 =	72
9 + 9 + 9 + 9 + 9 + 9 + 9 + 9 + 9 =	81	9 x 9 =	81
		9 x 10 =	90

Multiply by 9

Tip: Multiplying by 9 is the same as 10 x the number minus the number.
Example: 9×7 = 10x7 − 7 = 70 − 7 = 63

9 x 1 = 9	9 x 9 = 81
9 x 2 = 18	9 x 10 = 90
9 x 3 = 27	9 x 5 = 45
9 x 4 = 36	9 x 2 = 18
9 x 5 = 45	9 x 0 = 0
9 x 6 = 54	9 x 3 = 27
9 x 7 = 63	9 x 4 = 36
9 x 8 = 72	9 x 6 = 54

Count by 9's

9
18
27
36
45
54
63
72
81
90

Review of Multiplying by 8 and 9

This is a review of questions you have answered already in the previous pages.

9 x 2 = 18	8 x 3 = 24	5 x 8 = 40
8 x 2 = 16	9 x 2 = 18	9 x 5 = 45
9 x 3 = 27	8 x 7 = 56	8 x 5 = 40
8 x 4 = 32	4 x 9 = 36	5 x 9 = 45
8 x 1 = 8	6 x 9 = 54	9 x 8 = 72
8 x 5 = 40	9 x 7 = 63	8 x 8 = 64
5 x 9 = 45	9 x 4 = 36	9 x 9 = 81
9 x 6 = 54	8 x 6 = 48	8 x 9 = 72

Two Ways to Write a Multiplication Problem

There are two ways to write out multiplication problems.

$5 \times 2 = 10$ is the same as

$$\begin{array}{r} 5 \\ \times\ 2 \\ \hline 10 \end{array}$$

Solve the multiplication problems below

$6 \times 2 = 12$

$$\begin{array}{r} 6 \\ \times\ 2 \\ \hline 12 \end{array}$$

$7 \times 2 = 14$

$$\begin{array}{r} 7 \\ \times\ 2 \\ \hline 14 \end{array}$$

$6 \times 3 = 18$

$$\begin{array}{r} 6 \\ \times\ 3 \\ \hline 18 \end{array}$$

$8 \times 2 = 16$

$$\begin{array}{r} 8 \\ \times\ 2 \\ \hline 16 \end{array}$$

$7 \times 3 = 21$

$$\begin{array}{r} 7 \\ \times\ 3 \\ \hline 21 \end{array}$$

$8 \times 3 = 24$

$$\begin{array}{r} 8 \\ \times\ 3 \\ \hline 24 \end{array}$$

$9 \times 2 = 18$

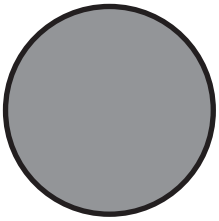
$$\begin{array}{r} 9 \\ \times\ 2 \\ \hline 18 \end{array}$$

$8 \times 4 = 32$

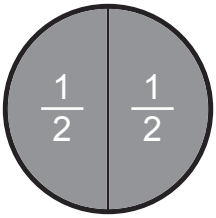
$$\begin{array}{r} 8 \\ \times\ 4 \\ \hline 32 \end{array}$$

Fraction Basics

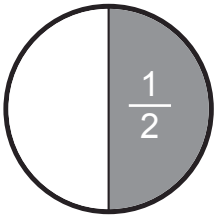
- Fraction describes equal parts of a whole
- If you have a whole pizza, and cut it into two equal pieces, each piece is one-half
- If you take one of the two pieces, you have one-half



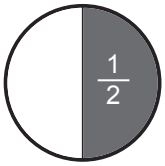
1 Whole



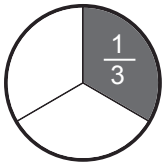
Split into two equal parts



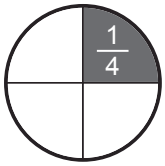
One-Half



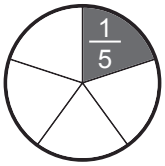
One-Half



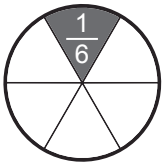
One-Third



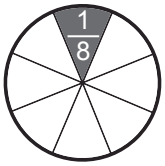
One-Quarter



One-Fifth



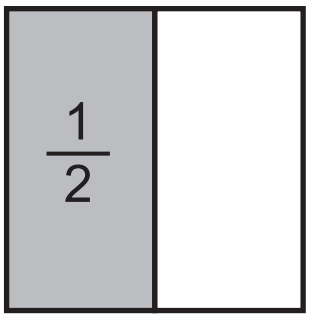
One-Sixth

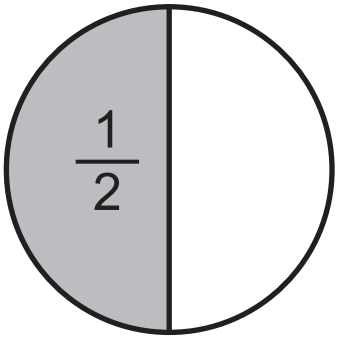


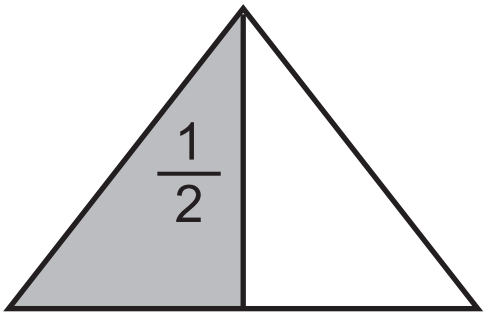
One-Eighth

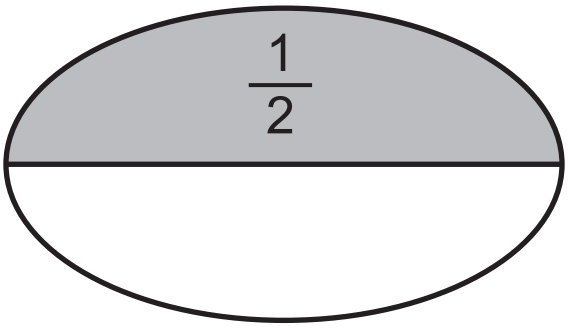
Color one-half of each shape below.

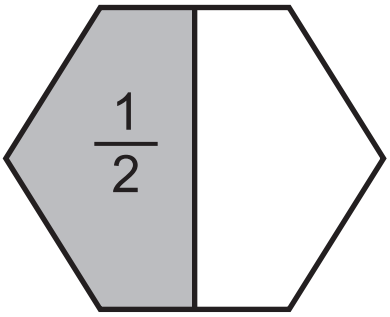
Write the fraction in the space you colored.







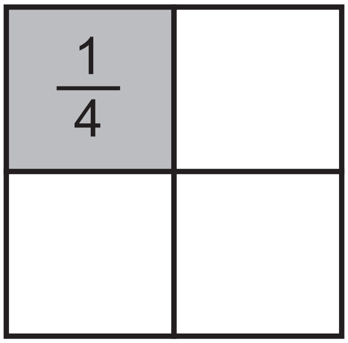


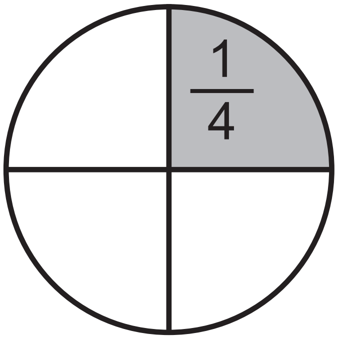


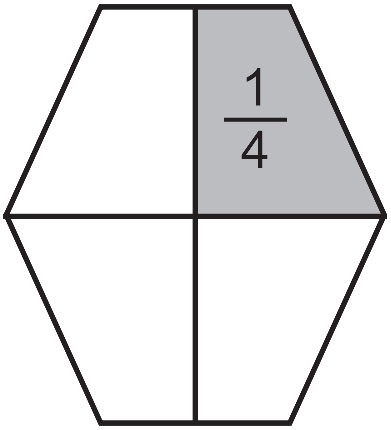
Fraction Basics: $\frac{1}{4}$ is One-Quarter

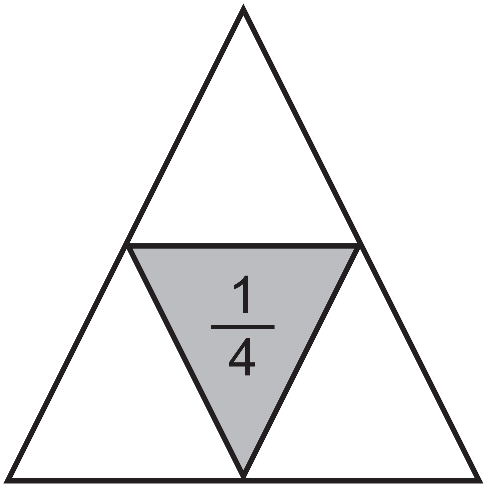
Color one-quarter of each shape below.

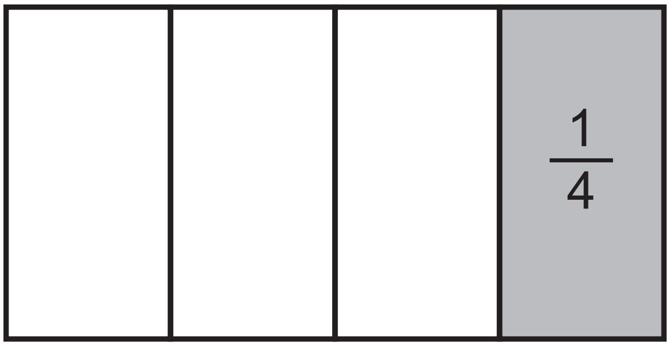
Write the fraction in the space you colored.

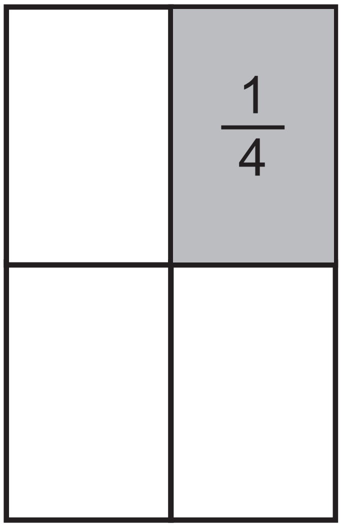


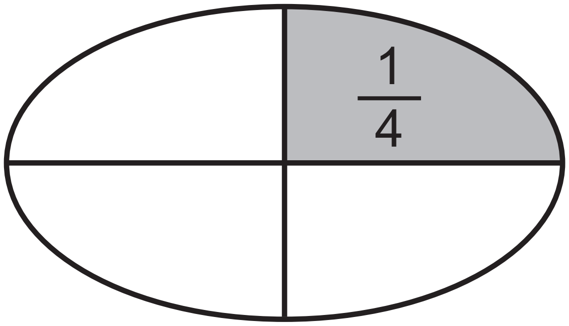








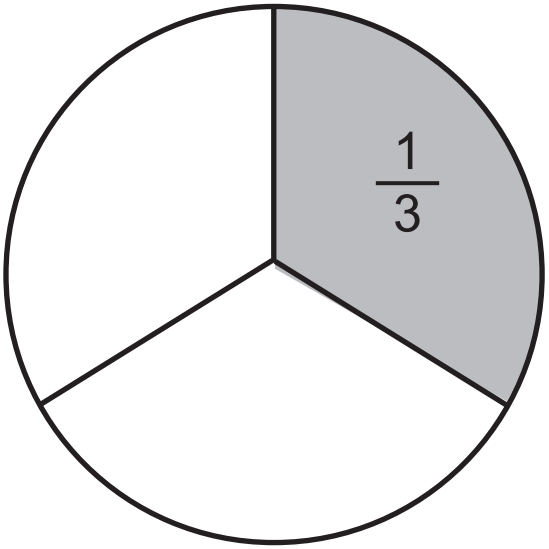


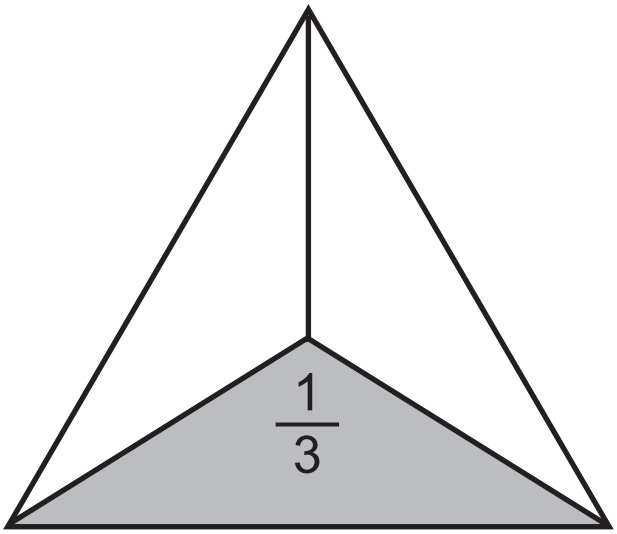


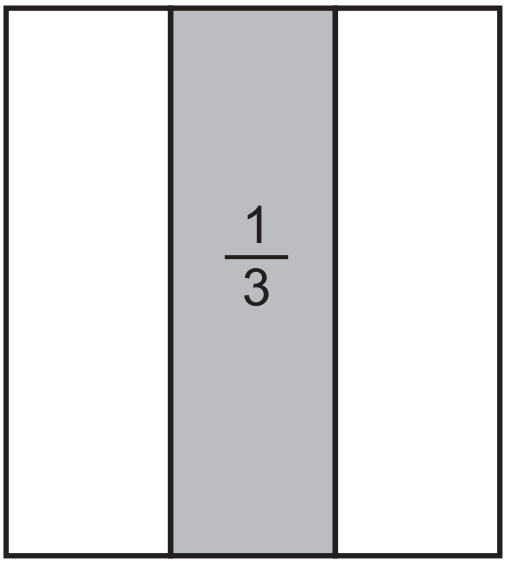
Fraction Basics: $\frac{1}{3}$ is One-Third

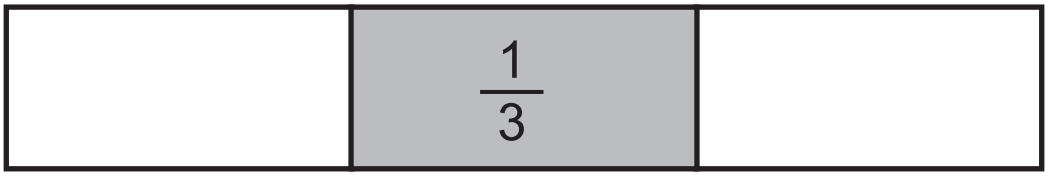
Color one-third of each shape below.

Write the fraction in the space you colored.



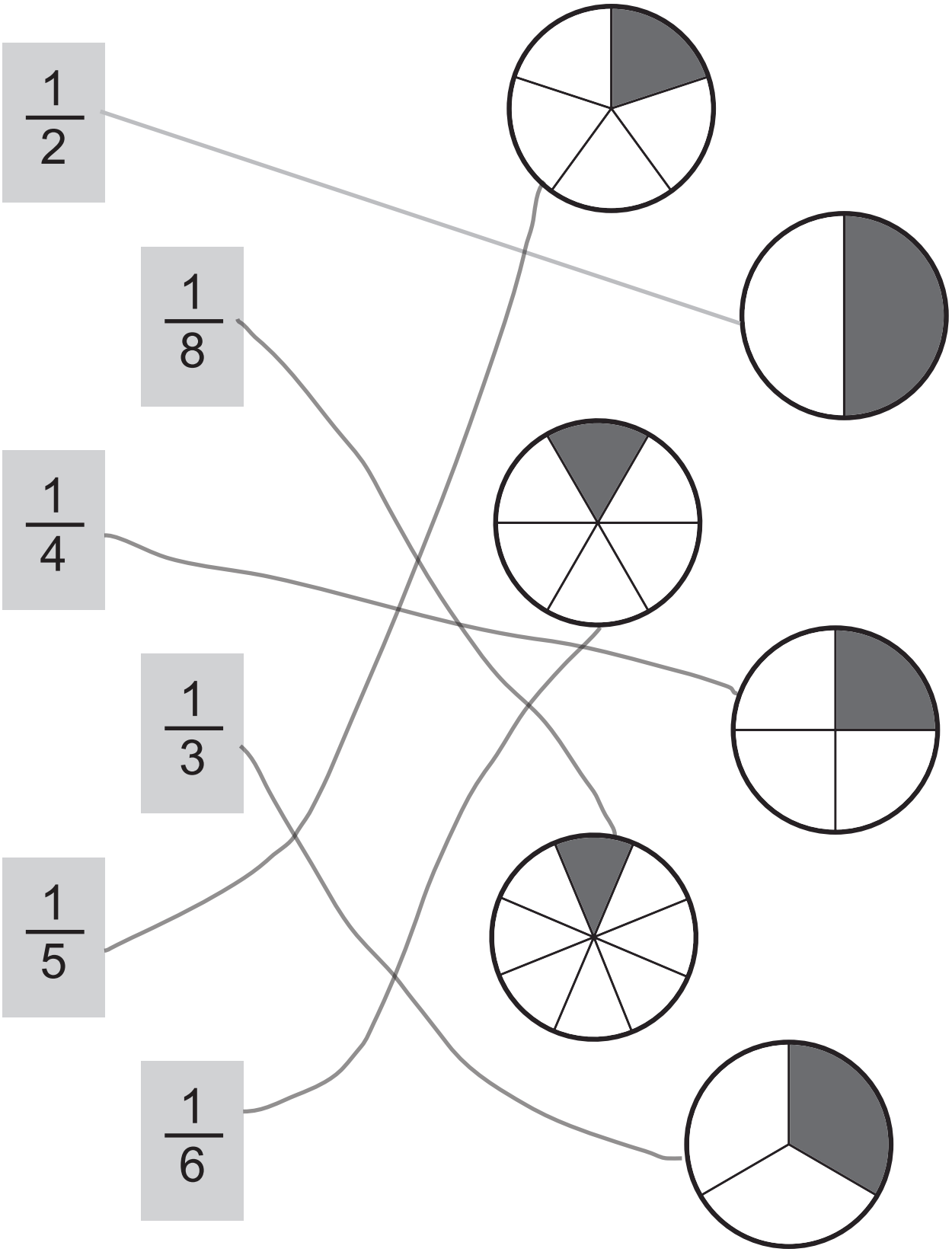






Fraction Basics

Draw a line from the fraction to the matching shape.



Fraction Basics

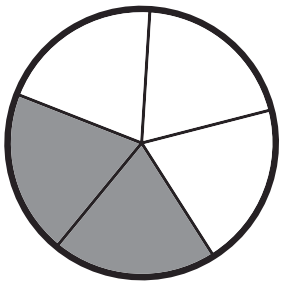
In a fraction, there are two numbers.

The top number is the numerator, and is how many pieces you have.

The bottom number is the denominator, and is how many pieces there are in total.

Numerator
Denominator

$$\frac{2}{5}$$



2 pieces out of
5 total pieces

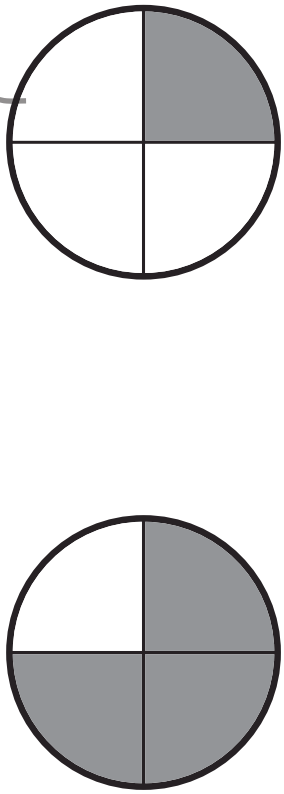
Draw a line from the fraction to the matching shape.

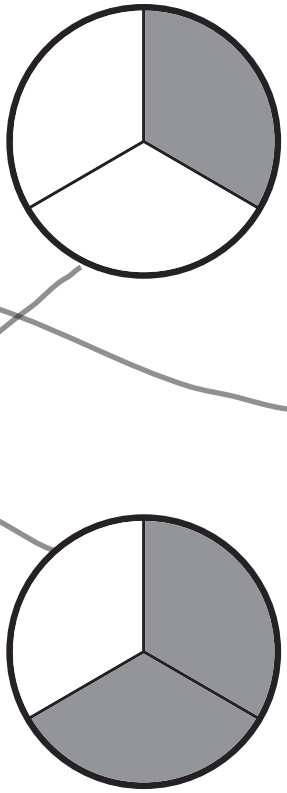
$$\frac{1}{4}$$

$$\frac{3}{4}$$

$$\frac{2}{3}$$

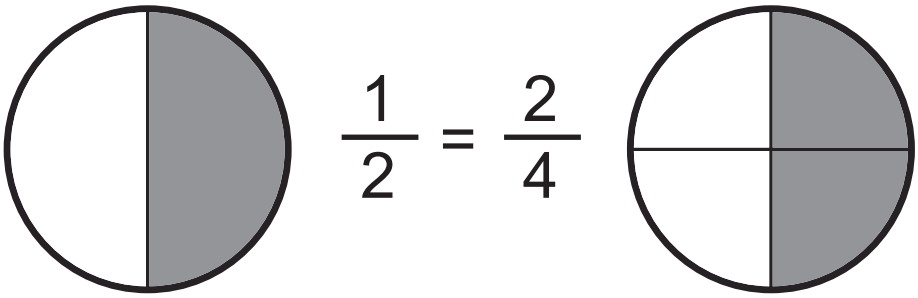
$$\frac{1}{3}$$



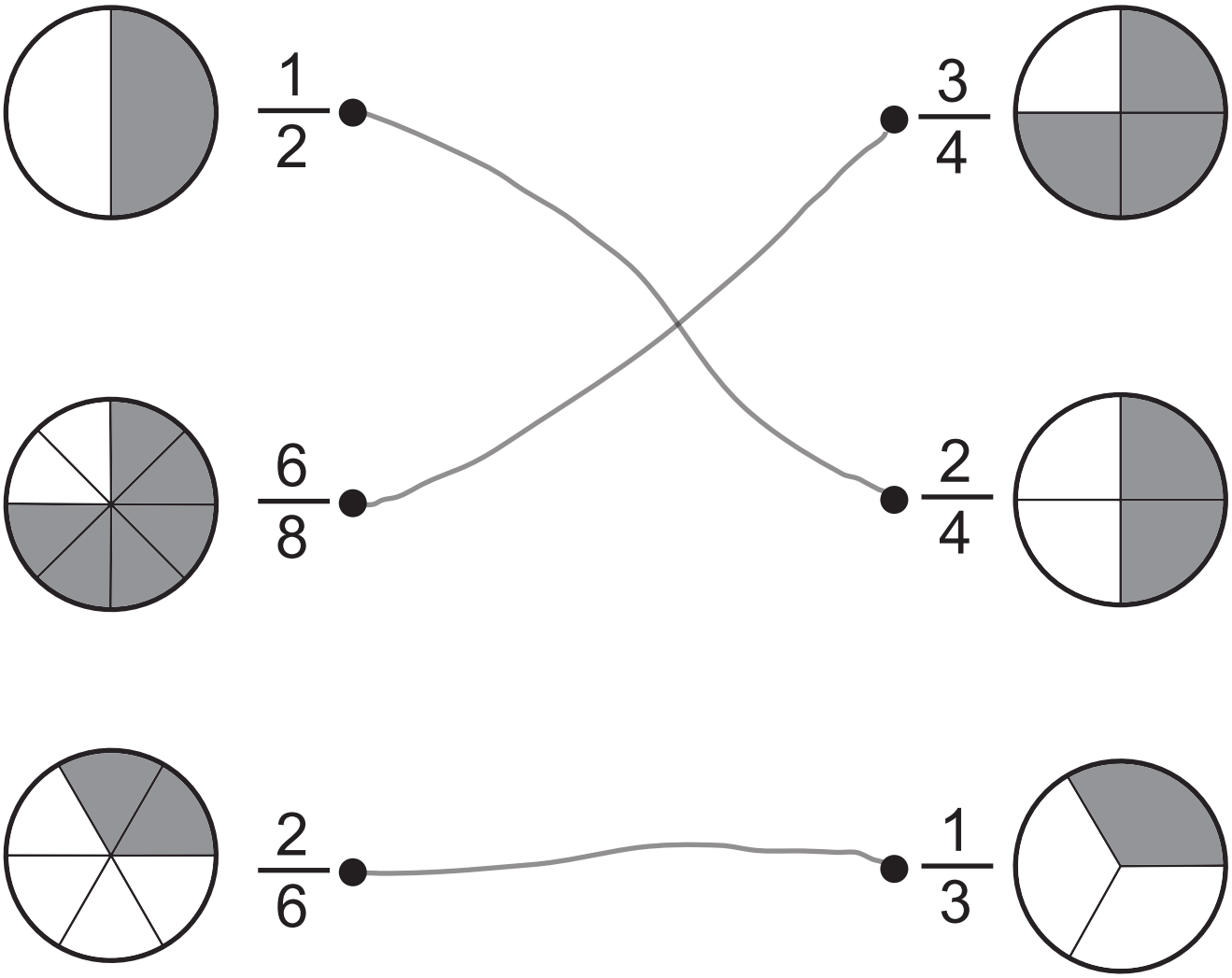


Fraction Basics - Equivalent Fractions

Equivalent fractions are fractions which have the same value, even though they may look different.

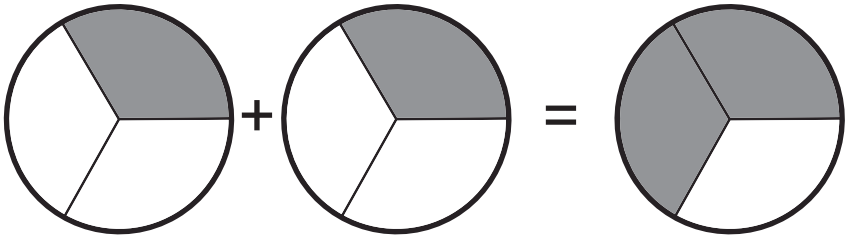


Draw a line to match the equivalent fractions.



Introduction to Fraction Addition

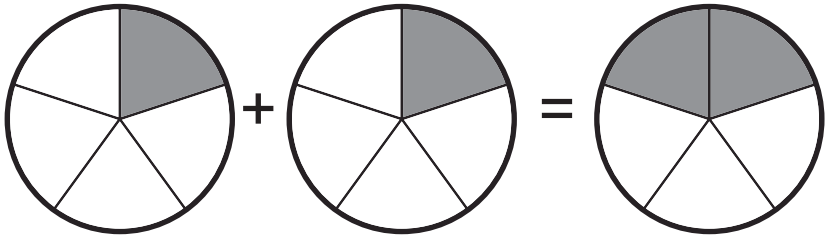
To add fractions, when the bottom numbers (denominators) are the same, just add the top numbers (numerators) and put that over the denominator.



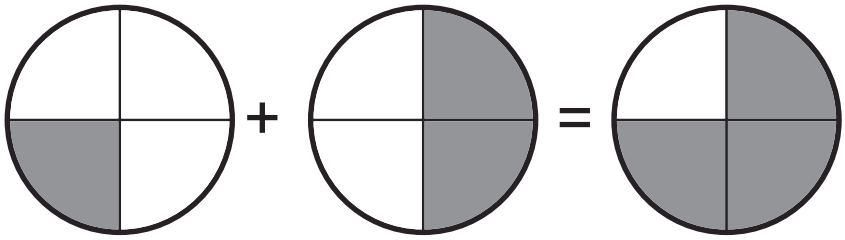
Just add top numbers

When denominators are the same

$$\frac{1}{3} + \frac{1}{3} = \frac{2}{3}$$



$$\frac{1}{5} + \frac{1}{5} = \boxed{\frac{2}{5}}$$



$$\frac{1}{4} + \frac{2}{4} = \boxed{\frac{3}{4}}$$

$$\frac{1}{3} + \frac{1}{3} = \boxed{\frac{2}{3}}$$

$$\frac{1}{5} + \frac{1}{5} = \boxed{\frac{2}{5}}$$

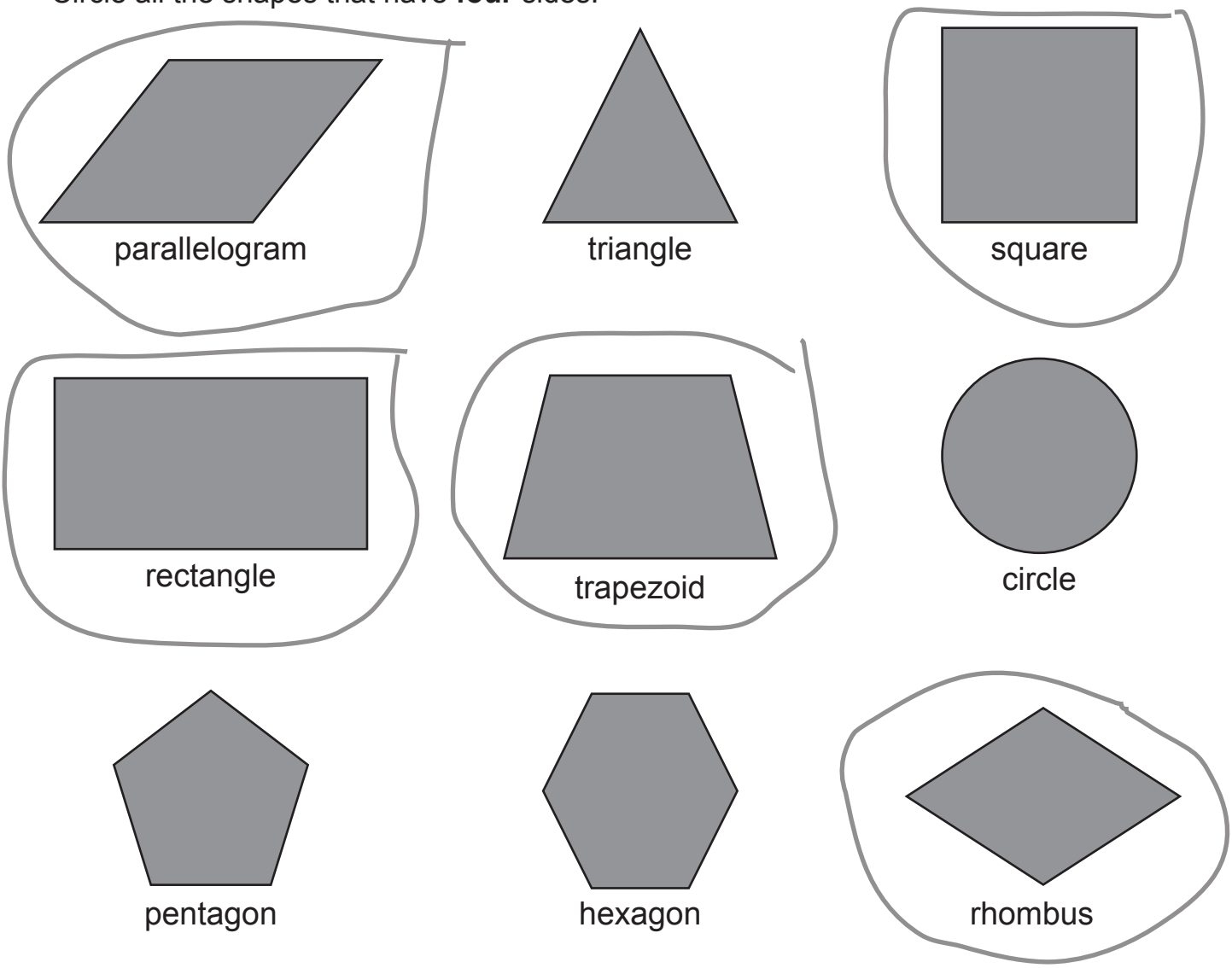
$$\frac{1}{5} + \frac{2}{5} = \boxed{\frac{3}{5}}$$

$$\frac{1}{4} + \frac{2}{4} = \boxed{\frac{3}{4}}$$

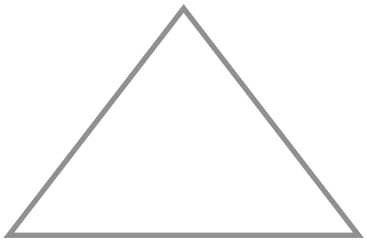
$$\frac{3}{8} + \frac{4}{8} = \boxed{\frac{7}{8}}$$

Shapes

Circle all the shapes that have **four** sides.



Draw a shape with **3** sides.



Write the name of the shape below:

triangle

Draw a shape with **4** sides.

Many answers possible.

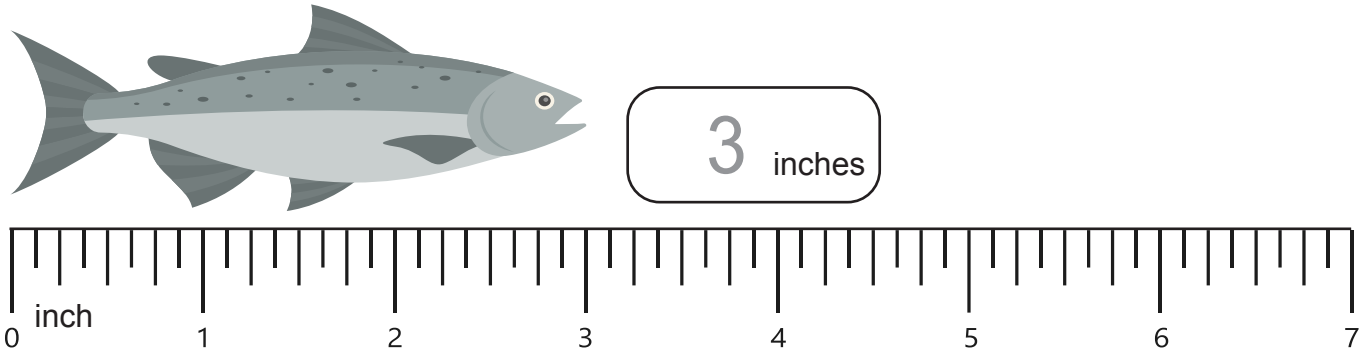
Any of the circled shapes above are shapes with 4 sides.

Write the name of the shape below:

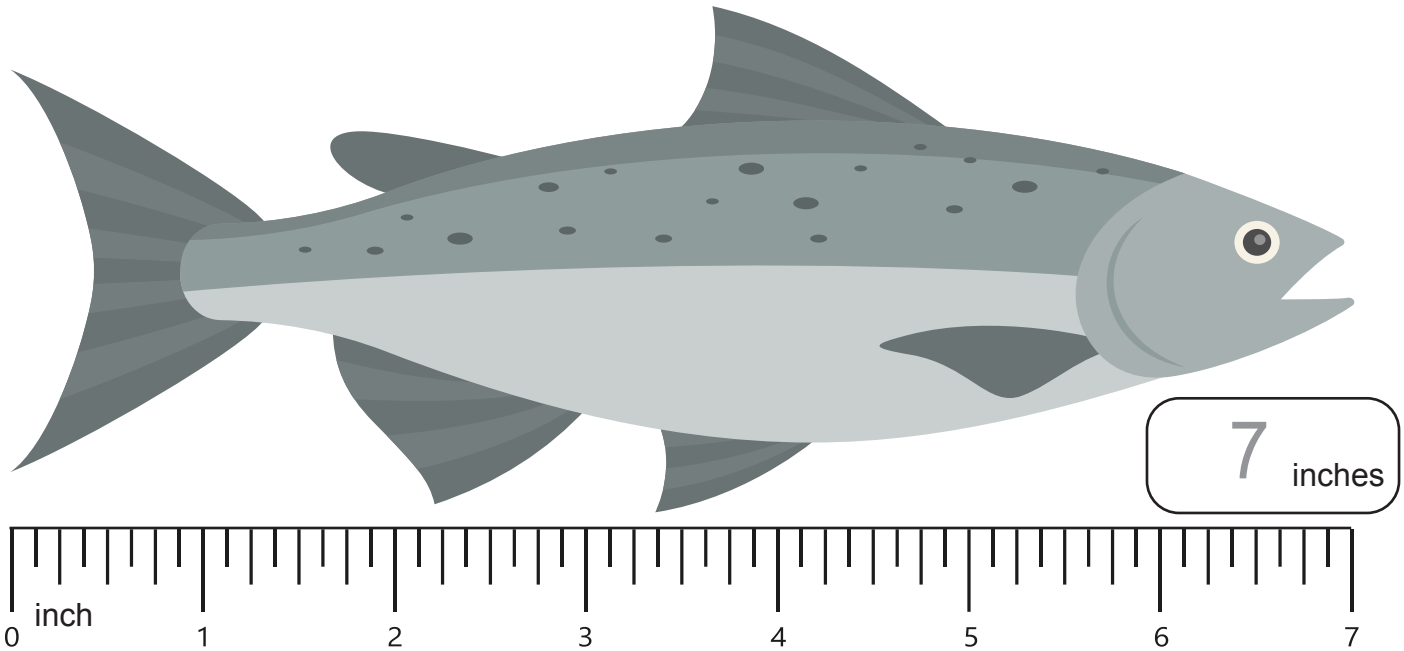
Measure the Fish

You can use rulers to measure how long something is.

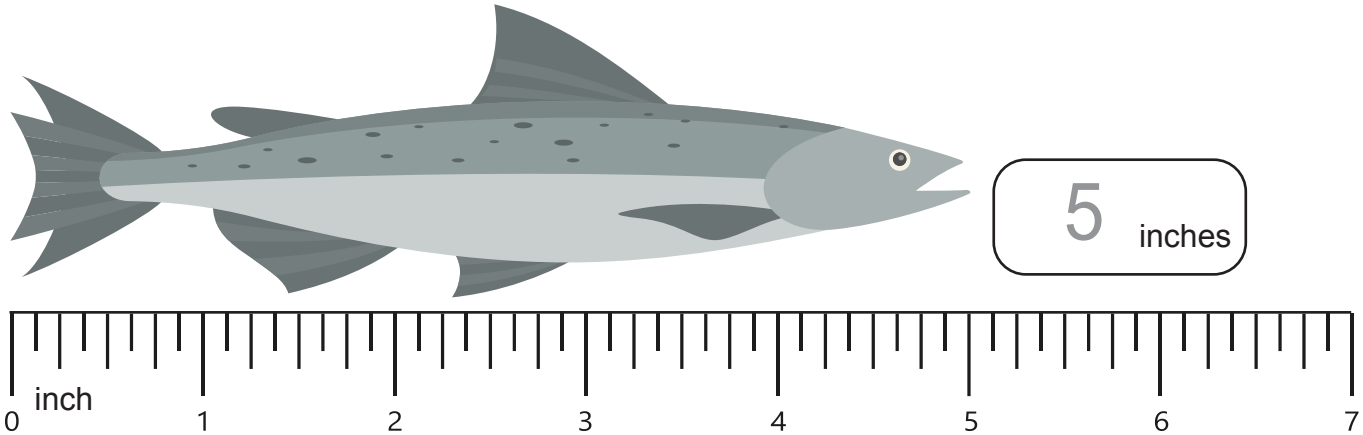
Write down how many inches each of these fish are using the rulers below them.



3 inches



7 inches



5 inches

Learning about Division ÷

There are 2 groups of 3 stars.

★★★ ★★★ 2 x 3 = 6

6 stars divided into 2 groups = 3 stars in each group. 6 ÷ 2 = 3

Division is just the opposite of multiplication.
Once you know how to multiply, you can divide!

★★★★ ★★★★ 2 x 4 = 8

8 ÷ 2 = 4

★★★★★ ★★★★★ 2 x 5 = 10

10 ÷ 2 = 5

★★★ ★★★ ★★★ 3 x 3 = 9

9 ÷ 3 = 3

★★★ ★★★ ★★★ ★★★ 4 x 3 = 12

12 ÷ 4 = 3

Learning about Division

Once you know your multiplication facts, you can divide.

Multiplication Fact	2 x 3 = 6
Related Division Facts	6 ÷ 2 = 3 6 ÷ 3 = 2

2 x 2 = 4	3 x 3 = 9	4 x 4 = 16
4 ÷ 2 = 2	9 ÷ 3 = 3	16 ÷ 4 = 4
2 x 4 = 8	2 x 5 = 10	3 x 4 = 12
8 ÷ 2 = 4	10 ÷ 2 = 5	12 ÷ 3 = 4
8 ÷ 4 = 2	10 ÷ 5 = 2	12 ÷ 4 = 3
2 x 6 = 12	3 x 2 = 6	3 x 5 = 15
12 ÷ 2 = 6	6 ÷ 2 = 3	15 ÷ 3 = 5
12 ÷ 6 = 2	6 ÷ 3 = 2	15 ÷ 5 = 3

Two Ways to Write a Division Problem

There are three parts to division problems: Dividend, Divisor, Quotient

There are two ways to write out division problems.

1

$$10 \div 2 = 5$$

Dividend

Divisor

Quotient

2

$$\begin{array}{r} 5 \\ 2\overline{)10} \end{array}$$

Quotient

Dividend

Divisor

Solve the division problems below

$6 \div 2 = 3$ $\quad$ $\begin{array}{r} 3 \\ 2\overline{)6} \end{array}$

$6 \div 3 = 2$ $\quad$ $\begin{array}{r} 2 \\ 3\overline{)6} \end{array}$

$12 \div 2 = 6$ $\quad$ $\begin{array}{r} 6 \\ 2\overline{)12} \end{array}$

$15 \div 3 = 5$ $\quad$ $\begin{array}{r} 5 \\ 3\overline{)15} \end{array}$

$8 \div 2 = 4$ $\quad$ $\begin{array}{r} 4 \\ 2\overline{)8} \end{array}$

$4 \div 2 = 2$ $\quad$ $\begin{array}{r} 2 \\ 2\overline{)4} \end{array}$

$10 \div 5 = 2$ $\quad$ $\begin{array}{r} 2 \\ 5\overline{)10} \end{array}$

$12 \div 3 = 4$ $\quad$ $\begin{array}{r} 4 \\ 3\overline{)12} \end{array}$

Dividing with 1

Divide by 1: When you divide a number by 1, the answer is always that number.

Example: 3 stars are divided into 1 group. There are 3 stars in the group.

3 ÷ 1 = 3

4 ÷ 1 = 4

8 ÷ 1 = 8

9 ÷ 1 = 9

11 ÷ 1 = 11

10 ÷ 1 = 10

100 ÷ 1 = 100

Any non-zero number divided by itself is always 1.

Example: 3 stars are divided into 3 groups. There is 1 star in each group.

3 ÷ 3 = 1

4 ÷ 4 = 1

10 ÷ 10 = 1

5 ÷ 5 = 1

20 ÷ 20 = 1

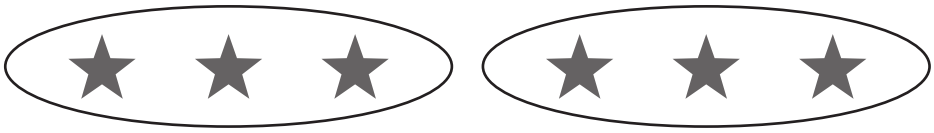
100 ÷ 100 = 1

999 ÷ 999 = 1

Dividing by 2

Dividing by 2: When you divide a number by 2, you are splitting the number into two groups. Tip: the answer is always one half of that number.

Example: 6 stars are divided into 2 groups. There are 3 stars in each group.



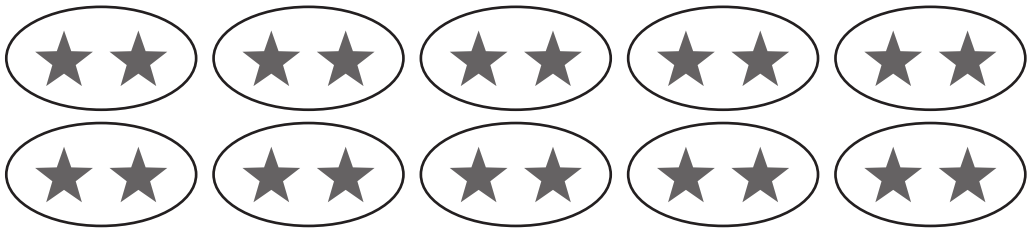
6 ÷ 2 = 3

4 ÷ 2 = 2	20 ÷ 2 = 10
6 ÷ 2 = 3	22 ÷ 2 = 11
8 ÷ 2 = 4	24 ÷ 2 = 12
10 ÷ 2 = 5	2 ÷ 2 = 1
12 ÷ 2 = 6	16 ÷ 2 = 8
14 ÷ 2 = 7	14 ÷ 2 = 7
16 ÷ 2 = 8	10 ÷ 2 = 5
18 ÷ 2 = 9	40 ÷ 2 = 20

Dividing by 10

Dividing by 10: When you divide a number by 10, you are splitting the number into 10 groups.

Example: 20 stars are divided into 10 groups. There are 2 stars in each group.



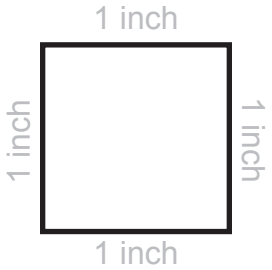
$$20 \div 10 = 2$$

Tip: Dividing by 10? Just drop the 0 and you have the answer!

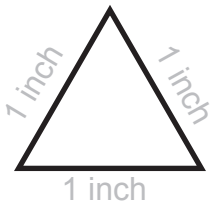
$30 \div 10 =$ 3	$20 \div 10 =$ 2
$40 \div 10 =$ 4	$70 \div 10 =$ 7
$50 \div 10 =$ 5	$80 \div 10 =$ 8
$100 \div 10 =$ 10	$90 \div 10 =$ 9
$60 \div 10 =$ 6	$10 \div 10 =$ 1

Measure the Sides, and Find the Perimeter

Using a ruler, measure the length of the sides of the shape in inches.
Then find the perimeter by adding all the sides.

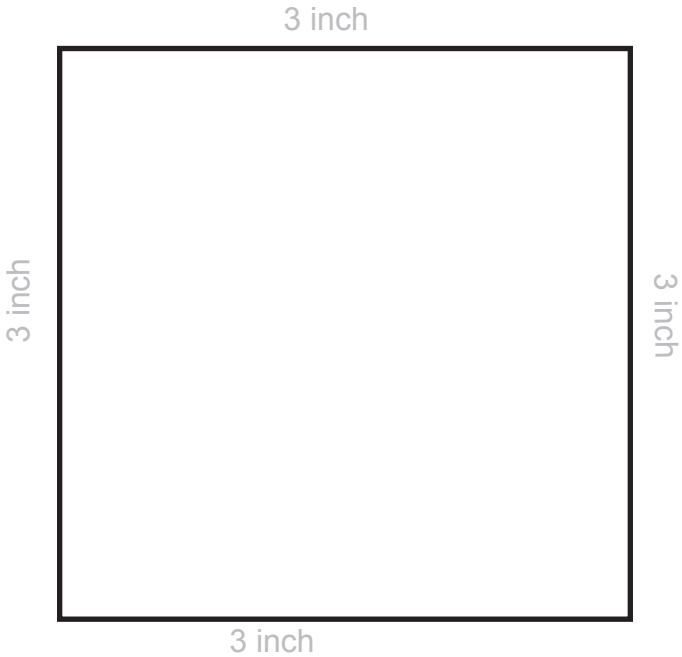


Perimeter = 4 inches

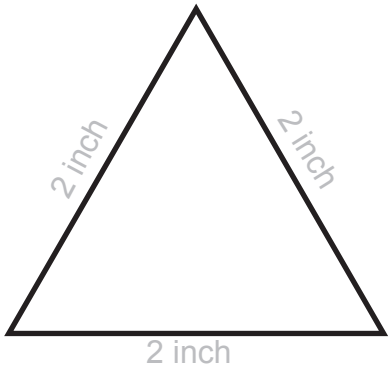


Perimeter = 3 inches

Perimeter = 12 inches

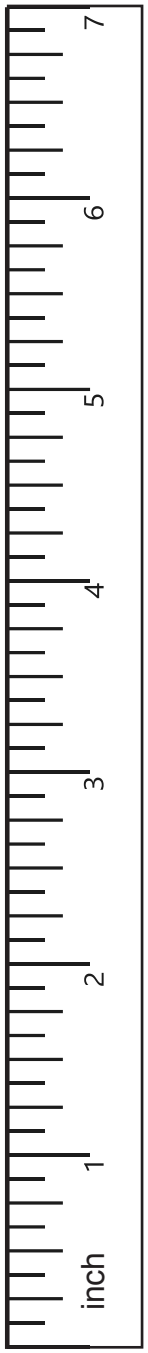


Perimeter = 12 inches



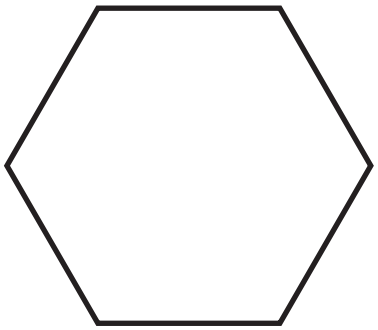
Perimeter = 6 inches

If you need a ruler, cut this one out.

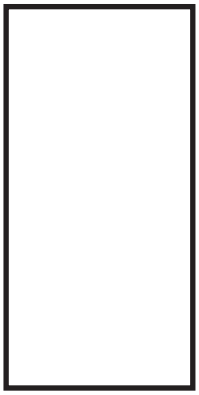


Measure the Sides, and Find the Perimeter

Using a ruler, measure the length of the sides of the shape in inches.
Then find the perimeter by adding all the sides.

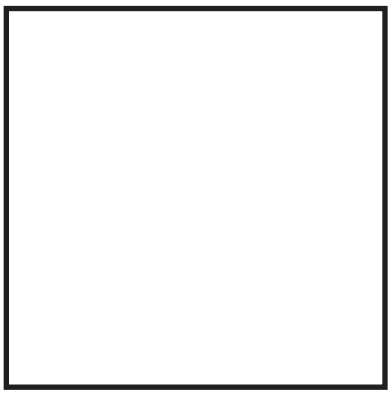


Perimeter = 6 inches

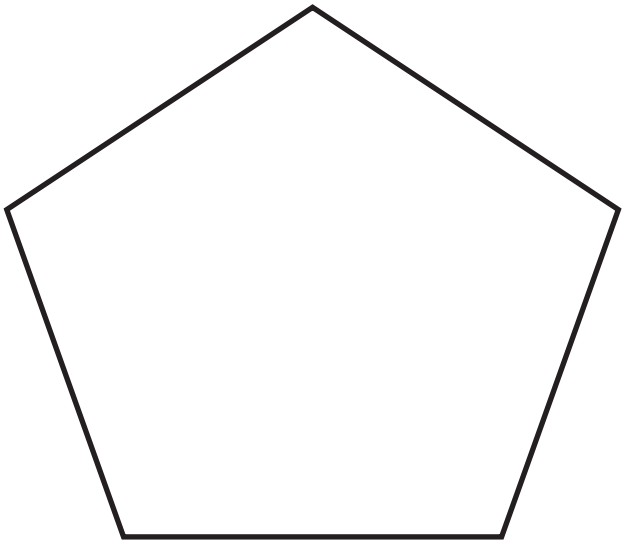


Perimeter = 6 inches

Perimeter = 8 inches



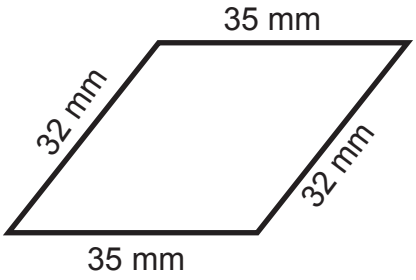
Perimeter = 8 inches

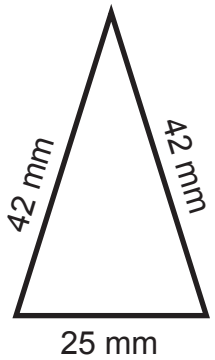


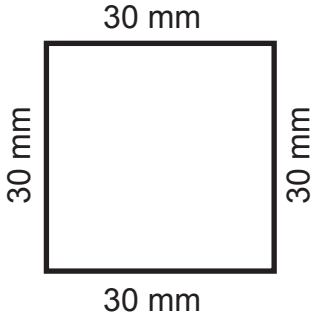
Perimeter = 10 inches

Find the Perimeter

Find the perimeter of each shape below. Just add all the sides!



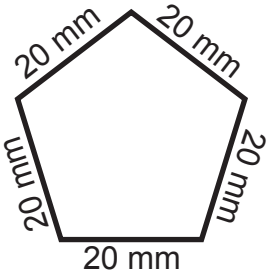




$$\begin{array}{r} 35 \\ 35 \\ 32 \\ +\ 32 \\ \hline \boxed{134} \end{array} \text{mm}$$

$$\begin{array}{r} 42 \\ 42 \\ +\ 25 \\ \hline \boxed{109} \end{array} \text{mm}$$

$$\begin{array}{r} 30 \\ 30 \\ 30 \\ +\ 30 \\ \hline \boxed{120} \end{array} \text{mm}$$



$$\begin{array}{r} 20 \\ 20 \\ 20 \\ 20 \\ +\ 20 \\ \hline \boxed{100} \end{array} \text{mm}$$

Review of Multiplication and Skip Counting

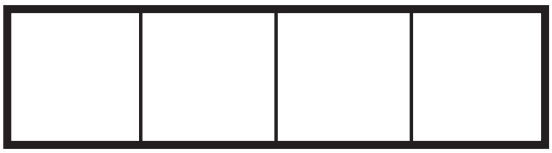
Fill in the missing numbers in the boxes below.

2	4	6	8	10	12	14	16
3	6	9	12	15	18	21	24
4	8	12	16	20	24	26	30
5	10	15	20	25	30	35	40
6	12	18	24	30	36	42	48
7	14	21	28	35	42	49	56
8	16	24	32	40	48	56	64

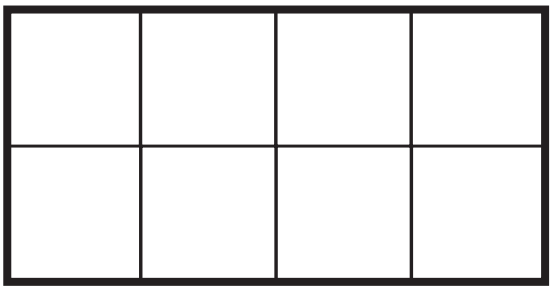
What is the Area? How Many Squares?

The shapes below are made of unit squares.

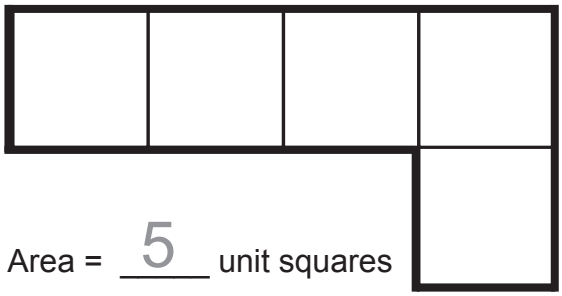
To find the area of the shape, count the unit squares!



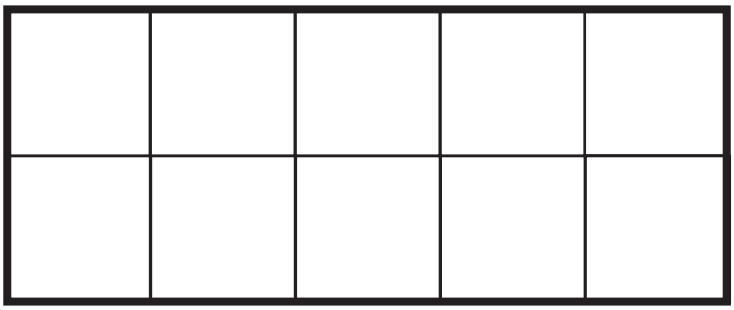
Area = 4 unit squares



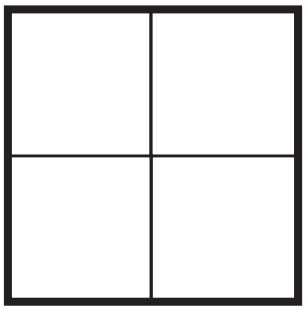
Area = 8 unit squares



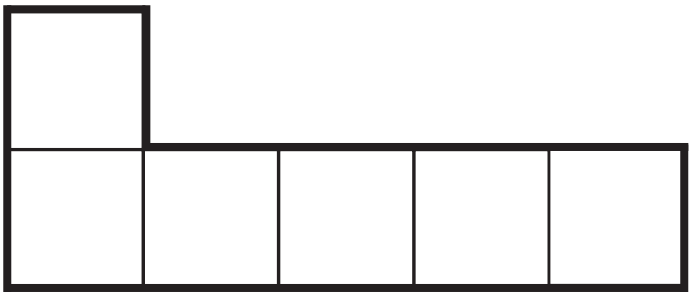
Area = 5 unit squares



Area = 10 unit squares



Area = 4 unit squares



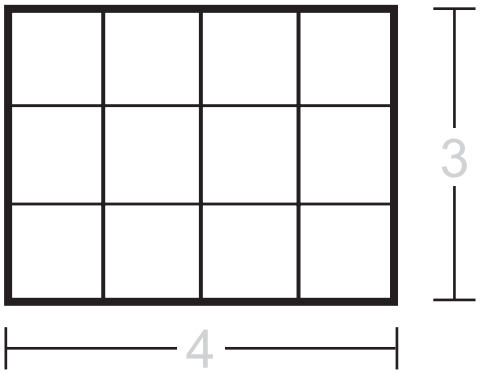
Area = 6 unit squares

Multiply to Find the Area of a Rectangle

You can use multiplication to find the area of a rectangle. It is faster than counting all the squares when there are lots of squares!

Area of a Rectangle = Width x Height

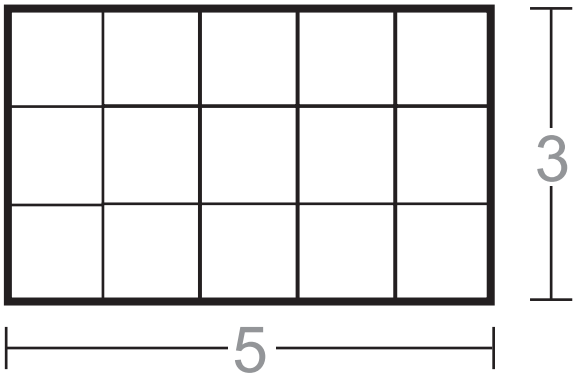
Label the width and height of each rectangle. Then use multiplication to find the area.



Width = 4 units

Height = 3 units

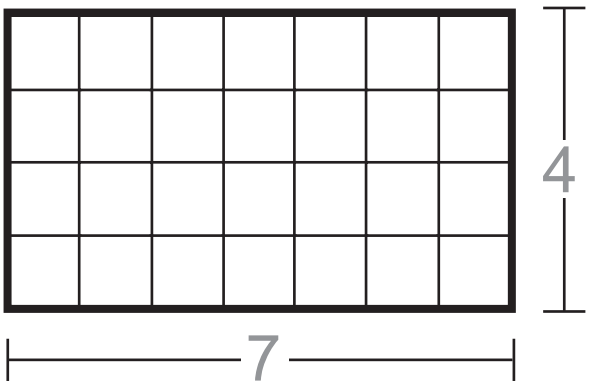
Area = 4 units x 3 units = 12 unit squares



Width = 5 units

Height = 3 units

Area = 5 units x 3 units = 15 unit squares



Width = 7 units

Height = 4 units

Area = 7 units x 4 units = 28 unit squares

Multiplication Grids - Review Multiplication 2 to 5

- Fill in the missing numbers in the grid.
- Multiply the number at the top with the number on the left to get the correct value for each box

	2	3	4	5	6	7	8	9	10
2	4	6	8	10	12	14	16	18	20
3	6	9	12	15	18	21	24	27	30
4	8	12	16	20	24	28	32	36	40
5	10	15	20	25	30	35	40	45	50

	2	3	4	5	6	7	8	9	10
2	4	6	8	10	12	14	16	18	20
3	6	9	12	15	18	21	24	27	30
4	8	12	16	20	24	28	32	36	40
5	10	15	20	25	30	35	40	45	50

Multiplication Grids - Review Multiplication 6 to 9

- Fill in the missing numbers in the grid.
- Multiply the number at the top with the number on the left to get the correct value for each box

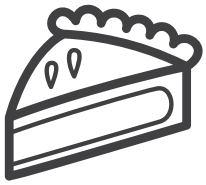
	2	3	4	5	6	7	8	9	10
6	12	18	24	30	36	42	48	54	60
7	14	21	28	35	42	49	56	63	70
8	16	24	32	40	48	56	64	72	80
9	18	27	36	45	54	63	72	81	90

	2	3	4	5	6	7	8	9	10
6	12	18	24	30	36	42	48	54	60
7	14	21	28	35	42	49	56	63	70
8	16	24	32	40	48	56	64	72	80
9	18	27	36	45	54	63	72	81	90

Money Math

In the United States and Canada, there are four commonly used coins:

Coin	¢ (Cents)
Penny	1¢
Nickel	5¢
Dime	10¢
Quarter	25¢

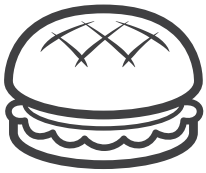


I used 2 quarters to pay for a slice of pie.
How much was the slice of pie?

25¢ + 25¢ = 50¢ 50 ¢

I used 7 dimes to pay for a pretzel.
How much was the pretzel?

7 x 10¢ = 70¢ 70 ¢



I used 3 quarters to pay for a burger.
How much was the burger?

25¢ + 25¢ + 25¢= 75¢
3 x 25¢= 75¢ 75 ¢

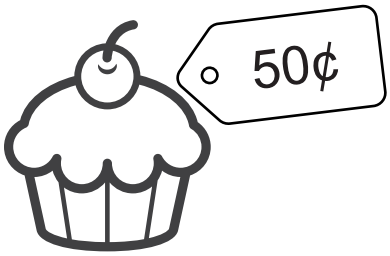
I used 1 quarter and 1 nickel to pay for bread.
How much was the bread?

25¢ + 5¢ = 30¢ 30 ¢

Money Math

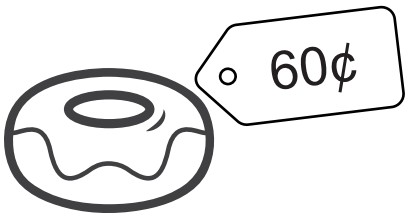
100 cents is the same as 1 dollar (100¢ = $1).

Coin	¢ (Cents)	How many coins to make $1?
Penny	1¢	100
Nickel	5¢	20
Dime	10¢	10
Quarter	25¢	4



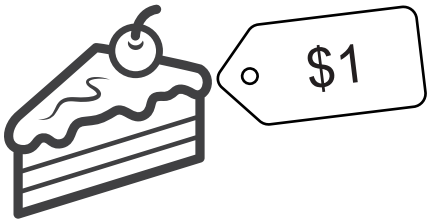
The cupcake costs 50¢.
How many quarters make 50¢?

2 quarters



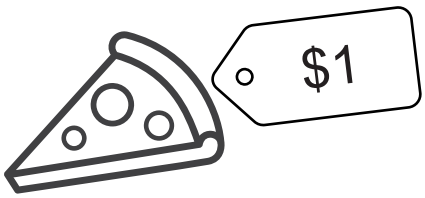
The donut costs 60¢.
How many dimes make 60¢?

6 dimes



The slice of cake costs $1.
How many dimes make $1?

10 dimes



The slice of pizza costs $1.
How many quarters make $1?

4 quarters

Multiplication Maze

Find the path for the multiples of 2.

start

2	4	6	11	7	27	9
9	5	8	10	9	11	15
7	12	15	12	14	25	30
8	13	14	21	16	18	20

finish

Find the path for the multiples of 3

start

3	1	5	16	7	2
6	9	8	10	32	11
7	12	15	18	20	26
8	20	14	21	24	22
13	18	25	28	27	30

finish

Multiplication Maze

Find the path for the multiples of 4

start

4	8	5	16	7	2
6	12	16	10	32	11
7	14	20	18	20	26
8	20	24	28	32	36
13	18	25	30	34	40

finish

Find the path for the multiples of 5.

start

5	4	6	11	7	27	9
10	15	20	22	9	11	15
7	12	25	30	35	36	27
8	13	14	33	40	45	50

finish

Multiplication Maze

Find the path for the multiples of 6.

start

6	12	21	28	7	27	9
9	18	25	32	34	38	46
7	24	30	36	40	44	52
8	13	14	42	48	54	60

finish

Find the path for the multiples of 7

start

7	14	20	35	42	50
16	21	8	10	32	11
24	28	35	42	48	58
30	20	14	49	56	59
13	18	25	28	63	70

finish

Multiplication Maze

Find the path for the multiples of 8

start

8	9	12	16	7	2
16	24	16	10	32	11
30	32	36	18	20	26
36	40	48	56	32	36
13	18	52	64	72	80

finish

Find the path for the multiples of 9.

start

9	12	6	11	7	27	9
18	27	36	45	54	11	15
25	30	40	52	63	72	81
32	13	14	33	70	80	90

finish

Balance the Equations

Fill in the numbers to make each equation true.

$3 + 2 = 1 + \boxed{4}$

$5 = 5$

$5 + 4 = 2 + \boxed{7}$

$6 + 4 = 3 + \boxed{7}$

$6 + 6 = \boxed{8} + 4$

$7 + 8 = \boxed{10} + 5$

$9 + 1 = \boxed{8} + 2$

$\boxed{14} + 3 = 15 + 2$

$\boxed{1} + 10 = 6 + 5$

$10 + \boxed{4} = 8 + 6$

$12 + \boxed{4} = 9 + 7$

$15 + \boxed{1} = 8 + 8$

Balance the Equations

Fill in the numbers to make each equation true.

4 - 2 = 1 + [1]

5 - 1 = 2 + [2]

3 + 4 = 10 - [3]

6 - 4 = [1] + 1

7 - 5 = [0] + 2

3 + 1 = [5] - 1

[5] + 3 = 12 - 4

[4] + 2 = 11 - 5

[1] + 1 = 7 - 5

10 - [3] = 4 + 3

12 - [6] = 9 - 3

15 - [5] = 2 + 8

Review: Addition with Regrouping (Carrying)

Add the ones
7 + 7 = 14
Regroup 14 ones
as 1 ten and 4 ones

$$\begin{array}{r} {\scriptstyle 1} \\ 27 \\ +\ \ 7 \\ \hline 4 \end{array}$$

Then add the tens
1 + 2 = 3 tens

$$\begin{array}{r} {\scriptstyle 1} \\ 27 \\ +\ \ 7 \\ \hline 34 \end{array}$$

$$\begin{array}{r} 75 \\ +\ \ 8 \\ \hline 83 \end{array} \qquad \begin{array}{r} 23 \\ +\ \ 9 \\ \hline 32 \end{array} \qquad \begin{array}{r} 65 \\ +\ 27 \\ \hline 92 \end{array} \qquad \begin{array}{r} 38 \\ +\ 49 \\ \hline 87 \end{array} \qquad \begin{array}{r} 65 \\ +\ 15 \\ \hline 80 \end{array}$$

$$\begin{array}{r} 21 \\ +\ 59 \\ \hline 80 \end{array} \qquad \begin{array}{r} 33 \\ +\ 68 \\ \hline 101 \end{array} \qquad \begin{array}{r} 89 \\ +\ \ 9 \\ \hline 98 \end{array} \qquad \begin{array}{r} 75 \\ +\ 16 \\ \hline 91 \end{array} \qquad \begin{array}{r} 23 \\ +\ 69 \\ \hline 92 \end{array}$$

$$\begin{array}{r} 45 \\ +\ 37 \\ \hline 82 \end{array} \qquad \begin{array}{r} 36 \\ +\ 58 \\ \hline 94 \end{array} \qquad \begin{array}{r} 58 \\ +\ 17 \\ \hline 75 \end{array} \qquad \begin{array}{r} 26 \\ +\ 19 \\ \hline 45 \end{array} \qquad \begin{array}{r} 34 \\ +\ 37 \\ \hline 71 \end{array}$$

$$\begin{array}{r} 35 \\ 46 \\ +\ 18 \\ \hline 99 \end{array} \qquad \begin{array}{r} 22 \\ 11 \\ +\ 49 \\ \hline 82 \end{array} \qquad \begin{array}{r} 16 \\ 23 \\ +\ 37 \\ \hline 76 \end{array} \qquad \begin{array}{r} 48 \\ 15 \\ +\ 15 \\ \hline 78 \end{array}$$

Review: Subtracting with Regrouping (Borrowing)

Subtract the ones.
3 is smaller than 7
so **regroup**!

43 is 4 tens and 3 ones.
Regroup as 3 tens and
13 ones. 13 - 7 = 6

$$\begin{array}{r} {\scriptstyle 3}\ {\scriptstyle 13} \\ \cancel{4}\,\cancel{3} \\ -\ 1\,7 \\ \hline 6 \end{array}$$

Then subtract the tens.
3 - 1 = 2 tens

$$\begin{array}{r} {\scriptstyle 3}\ {\scriptstyle 13} \\ \cancel{4}\,\cancel{3} \\ -\ 1\,7 \\ \hline 2\,6 \end{array}$$

$$\begin{array}{r} 62 \\ -\ 38 \\ \hline 24 \end{array} \quad \begin{array}{r} 90 \\ -\ 23 \\ \hline 67 \end{array} \quad \begin{array}{r} 75 \\ -\ 56 \\ \hline 19 \end{array} \quad \begin{array}{r} 46 \\ -\ 18 \\ \hline 28 \end{array} \quad \begin{array}{r} 38 \\ -\ 29 \\ \hline 9 \end{array}$$

$$\begin{array}{r} 27 \\ -\ 19 \\ \hline 8 \end{array} \quad \begin{array}{r} 32 \\ -\ 27 \\ \hline 5 \end{array} \quad \begin{array}{r} 75 \\ -\ 46 \\ \hline 29 \end{array} \quad \begin{array}{r} 51 \\ -\ 25 \\ \hline 26 \end{array} \quad \begin{array}{r} 43 \\ -\ 28 \\ \hline 15 \end{array}$$

$$\begin{array}{r} 84 \\ -\ 38 \\ \hline 46 \end{array} \quad \begin{array}{r} 35 \\ -\ 16 \\ \hline 19 \end{array} \quad \begin{array}{r} 46 \\ -\ 37 \\ \hline 9 \end{array} \quad \begin{array}{r} 57 \\ -\ 19 \\ \hline 38 \end{array} \quad \begin{array}{r} 48 \\ -\ 19 \\ \hline 29 \end{array}$$

$$\begin{array}{r} 50 \\ -\ 35 \\ \hline 15 \end{array} \quad \begin{array}{r} 22 \\ -\ 14 \\ \hline 8 \end{array} \quad \begin{array}{r} 43 \\ -\ 29 \\ \hline 14 \end{array} \quad \begin{array}{r} 61 \\ -\ 23 \\ \hline 38 \end{array} \quad \begin{array}{r} 81 \\ -\ 12 \\ \hline 69 \end{array}$$

Review: Multiplication Practice

If you need to, go back to the earlier multiplication pages to review.

2 x 2 = 4	6 x 2 = 12	7 x 3 = 21
3 x 2 = 6	9 x 2 = 18	4 x 7 = 28
4 x 3 = 12	2 x 7 = 14	8 x 4 = 32
2 x 4 = 8	6 x 3 = 18	5 x 8 = 40
5 x 2 = 10	4 x 6 = 24	9 x 5 = 45
3 x 5 = 15	5 x 6 = 30	6 x 8 = 48
4 x 5 = 20	6 x 6 = 36	9 x 6 = 54
5 x 5 = 25	7 x 6 = 42	8 x 8 = 64

Review: Division Practice

Solve the division problems below.

Hint: the previous Multiplication Practice page will help you!

4 ÷ 2 = 2	12 ÷ 2 = 6	21 ÷ 3 = 7
6 ÷ 2 = 3	18 ÷ 2 = 9	28 ÷ 4 = 7
12 ÷ 3 = 4	14 ÷ 2 = 7	32 ÷ 4 = 8
8 ÷ 2 = 4	18 ÷ 3 = 6	40 ÷ 5 = 8
10 ÷ 2 = 5	24 ÷ 4 = 6	45 ÷ 5 = 9
15 ÷ 3 = 5	30 ÷ 5 = 6	48 ÷ 6 = 8
20 ÷ 4 = 5	36 ÷ 6 = 6	54 ÷ 6 = 9
25 ÷ 5 = 5	42 ÷ 6 = 7	64 ÷ 8 = 8

Challenge: Three-Digits Addition and Subtraction

583 - 331 252	145 + 493 638	967 - 342 625	765 + 136 901	630 - 216 414
258 + 432 690	551 - 495 56	308 + 497 805	865 - 573 292	646 + 212 434
568 - 465 103	665 + 245 910	800 - 259 541	165 + 65 230	987 - 654 333
389 + 467 856	898 - 768 130	164 + 138 302	629 - 468 161	867 + 114 981
135 - 97 38	687 + 269 956	750 - 680 70	856 - 298 558	486 + 58 544

Where are the answers?

We know kids will peek at the answers at the back of workbooks, so we are not including answers at the back of this book on purpose. For a pdf of the answer key, go to www.numberbondgames.com/books

If you liked this book...

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Congratulations!

_____

has completed 100 pages of 2nd (and 3rd grade) math problems

_____

Date