

Volcano Language & Math Pack for 4th & 5th Grades

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Name: _____

Copywork

Copy the sentences written below.

A volcano is an opening on the surface of a planet or moon that allows material warmer than its surroundings to escape from its interior. When this material escapes, it causes an eruption.



Name: _____

Copywork

Copy the sentences written below.

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Name: _____

Run-On Sentences

A run-on sentence contains two or more complete sentences. One way to correct a run-on sentence is to break it up into separate sentences. Rewrite each run-on sentence below by separating it into two complete sentences.

1. Dr. Chowdary discovered 47 large igneous rocks at the first geological site she found 51 more at the second site.
2. People love visiting national parks a record number of people visited Yellowstone National Park last year.
3. There were many sizeable earthquakes near the volcano the day before it erupted the large number of earthquakes led authorities to evacuate people staying near by, saving lives.
4. Magma is hot, molten rock under the surface of the earth once it reaches the surface, we call it lava.
5. When Mount Vesuvius erupted, it covered the city of Pompeii in up to 20 feet of volcanic ash all of the people in the city at that time died.
6. Pompeii is one of the most popular and largest archaeological tourist spots in the entire world it was buried by volcanic ash in 79 AD and discovered again in 1599.

ANSWER KEY

Run-On Sentences

A run-on sentence contains two or more complete sentences. One way to correct a run-on sentence is to break it up into separate sentences. Rewrite each run-on sentence below by separating it into two complete sentences.

1. Dr. Chowdary discovered 47 large igneous rocks at the first geological site. She found 51 more at the second site.
2. People love visiting national parks. A record number of people visited Yellowstone National Park last year.
3. There were many sizeable earthquakes near the volcano the day before it erupted. The large number of earthquakes led authorities to evacuate people staying near by, saving lives.
4. Magma is hot, molten rock under the surface of the earth. Once it reaches the surface, we call it lava.
5. When Mount Vesuvius erupted, it covered the city of Pompeii in up to 20 feet of volcanic ash. All of the people in the city at that time died.
6. Pompeii is one of the most popular and largest archaeological tourist spots in the entire world. It was buried by volcanic ash in 79 AD and discovered again in 1599.

Name: _____

Homophones

Homophones are pairs of words that sound the same, but have different meanings and different spellings. Read the sentences below and circle the correct homophone to complete each sentence.

1. Hearing the explosion of the volcanic eruption made Avery's (hare, hair) stand on end.
2. Volcanoes are amazing to watch, but you do (knot, not) want to live too close to an active one!
3. I (know, no) that Mount Vesuvius last erupted in 1944.
4. After a volcanic eruption, the (scent, cent) of smoke and ash will be strong.
5. The (air, heir) smelled like soot after lava poured out of the volcano.
6. I need to go to the store to (by, buy) the materials I need for my volcano science experiment.
7. Can we take a (break, brake) from hiking this tall volcano?
8. A (whole, hole) in the top of the volcano allowed the lava to spurt out.

ANSWER KEY

Homophones

Homophones are pairs of words that sound the same, but have different meanings and different spellings. Read the sentences below and circle the correct homophone to complete each sentence.

1. Hearing the explosion of the volcanic eruption made Avery's (hare, **hair**) stand on end.
2. Volcanoes are amazing to watch, but you do (knot, **not**) want to live too close to an active one!
3. I (**know**, no) that Mount Vesuvius last erupted in 1944.
4. After a volcanic eruption, the (**scent**, cent) of smoke and ash will be strong.
5. The (**air**, heir) smelled like soot after lava poured out of the volcano.
6. I need to go to the store to (by, **buy**) the materials I need for my volcano science experiment.
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Name: _____



Word Scramble

Unscramble the words and write them on the lines.

1. rnpouiet

2. convalo

3. mgaam

4. rratec

5. nocttecis

6. dhiles

7. tkaahueerq

8. rstuc

ANSWER KEY



Word Scramble

Unscramble the words and write them on the lines.

- | | |
|---------------|-------------------|
| 1. rnpouiet | <u>Eruption</u> |
| 2. convalo | <u>Volcano</u> |
| 3. mgaam | <u>Magma</u> |
| 4. rratec | <u>Crater</u> |
| 5. nocttecis | <u>Tectonics</u> |
| 6. dhiles | <u>Shield</u> |
| 7. tkaahueerq | <u>Earthquake</u> |
| 8. rstuc | <u>Crust</u> |

Name: _____



Word Search

E	H	U	W	J	T	N	T	K	L	Q	E	A	D
W	X	U	Z	L	P	H	O	C	A	W	Q	V	N
T	T	I	B	V	I	Y	M	I	O	T	E	A	P
Z	E	T	S	U	R	C	N	L	T	A	N	L	M
B	O	C	C	R	J	C	F	J	R	P	W	E	D
A	Q	W	T	Q	C	R	A	T	E	R	U	I	V
D	I	X	Q	O	A	N	H	Y	S	P	I	R	W
O	X	X	G	M	N	Q	S	R	H	C	Y	D	E
N	T	N	G	V	U	I	R	G	I	U	W	P	X
A	U	A	U	A	L	X	C	C	E	D	R	T	Q
C	M	C	K	R	O	C	K	S	L	R	U	B	W
L	S	E	C	L	M	Z	Y	L	D	V	X	W	L
O	S	E	T	O	O	Q	R	Z	O	L	K	Q	O
V	L	Q	I	J	L	A	Y	T	Q	M	Y	N	G

Eruption
Volcano
Magma
Crater

Tectonics
Shield
Earthquake
Crust

Vent
Lava
Flow
Rocks

Name: _____

Antonyms

*Antonyms are words that have opposite meanings.
Change the grey word in each sentence to its antonym in the word bank.*

boring
freezing

inactive
artificial

above
short

1. Lava inside a volcano is **scalding** hot. _____
2. In Hawaii there are many **tall** volcanoes. _____
3. Volcanoes are an amazing **natural** wonder! _____
4. Be very careful if you ever visit an **active** volcano! _____
5. Before a volcanic eruption, lava and heat lie **below** the mountain's surface. _____
6. Watching a volcano erupt is a **thrilling** sight to see! _____

ANSWER KEY

Antonyms

*Antonyms are words that have opposite meanings.
Change the grey word in each sentence to its antonym in the word bank.*

boring
freezing

inactive
artificial

above
short

1. Magma inside a volcano is so hot is it **scalding**. freezing
2. In Hawaii there are many **tall** volcanoes. short
3. Volcanoes are an amazing **natural** wonder! artificial
4. Be very careful if you ever visit an **active** volcano! inactive
5. Before a volcanic eruption, lava and heat lie **below** the mountain's surface. above
6. Watching a volcano erupt is a **thrilling** sight to see! boring

Name: _____



Research

Use resources from the library or the internet to learn about volcanoes. Write an essay describing how volcanoes are formed. Use a separate sheet of paper if needed.

[illegible]

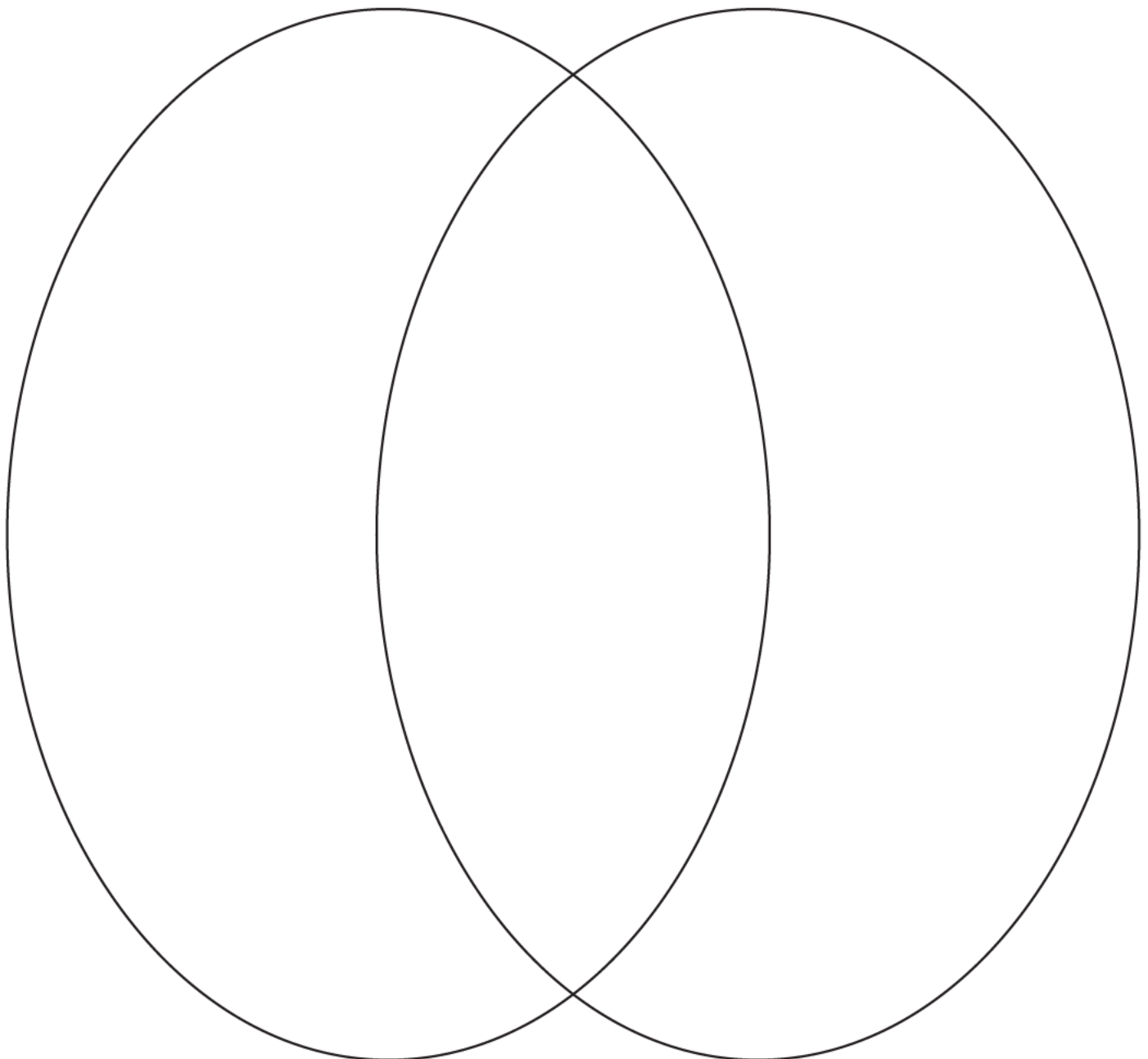
Name: _____

Compare and Contrast

Compare and contrast what you know about magma and lava. Facts that are only true about magma go on the left, facts that are only true about lava go on the right, and facts that are true about both go into the middle.

Magma

Lava



Name: _____

Multiplication Word Problems

1. The backhoe lifts 526 pounds of rock in one scoop. The backhoe cleared 17 scoops of rock from the geological site. How many pounds of rock did the backhoe clear?
2. There are 65 spaces on each volcano tour. The tour is offered six times a day. How many people can take the volcano tour each day?
3. At the gift shop, 183 volcano books were sold each month. How many volcano books were sold in one year?
4. The Volcano Tour costs \$35 for each adult and \$25 for each child. Dad, Mom, and Grandma need to pay the adult rate. Suzie, Stevie, Beth and Brian need to pay the child rate. How much money will it cost the family to take the tour?

ANSWER KEY

Multiplication Word Problems

1. The backhoe lifts 526 pounds of rock in one scoop. The backhoe cleared 17 scoops of rock from the geological site. How many pounds of rock did the backhoe clear?

$$526 \times 17 = 8,942 \text{ pounds}$$

2. There are 65 spaces on each volcano tour. The tour is offered six times a day. How many people can take the volcano tour each day?

$$65 \times 6 = 390 \text{ people}$$

3. At the gift shop, 183 volcano books were sold each month. How many volcano books were sold in one year?

$$183 \times 12 = 2,196 \text{ (learner needs to know there are 12 months in one year)}$$

4. The Volcano Tour costs \$35 for each adult and \$25 for each child. Dad, Mom, and Grandma need to pay the adult rate. Suzie, Stevie, Beth and Brian need to pay the child rate. How much money will it cost the family to take the tour?

$$(35 \times 3) + (25 \times 4) = \$205$$

Name: _____

Division Word Problems

1. Peter, Mateo, and Sarai were assigned to study 15 different volcanoes for a project. If they each research an equal number of volcanoes, how many will each have to research?
2. There were seven large groups of students on the Yellowstone tour. If there were 28 park rangers to help with the tour, how many park rangers went with each group?
3. Old Faithful Geyser erupts about every 90 minutes. Pam and her family plan to watch Old Faithful for 3 hours (180 minutes). How many times will they see Old Faithful erupt during the three hours?
4. There are 66 pages in the book *Vulcan Volcano*. If Ted wants to finish the book in 6 days, how many pages will he have to read each day?

ANSWER KEY

Division Word Problems

1. Peter, Mateo, and Sarai were assigned to study 15 different volcanoes for a project. If they each research an equal number of volcanoes, how many will each have to research?

$$15 / 3 = 5 \text{ volcanoes}$$

2. There were seven large groups of students on the Yellowstone tour. If there were 28 park rangers to help with the tour, how many park rangers went with each group?

$$28 / 7 = 4 \text{ rangers}$$

3. Old Faithful Geyser erupts about every 90 minutes. Pam and her family plan to watch Old Faithful for 3 hours (180 minutes). How many times will they see Old Faithful erupt during the three hours?

$$180 / 90 = 2 \text{ times}$$

4. There are 66 pages in the book *Vulcan Volcano*. If Ted wants to finish the book in 6 days, how many pages will he have to read each day?

$$66 / 6 = 11 \text{ pages per day}$$

Name: _____

Division Word Problems

1. There are 450 volcanoes in the Ring of Fire. If Jack visits 15 of these volcanoes each year, how many years will it take him to visit all 450?
2. About 300,000 people make it to the top of Mt. Fuji during the climbing season. If the climbing season is eight weeks long, on average, how many people make it to Mt. Fuji's summit each week?
3. In 2010, the Eyjafjallajokull volcano in Iceland erupted, canceling flights between Europe and North America. In total, 95,000 flights were cancelled during a 6-day period. On average, how many flights were cancelled per day? (Round to the nearest whole number.)
4. In December 2014, a new Tonga island was formed by an underwater volcano. 48 months later, pink flowers started growing and birds began nesting on the new island. What month and year did the new island begin to support life?

ANSWER KEY

Division Word Problems

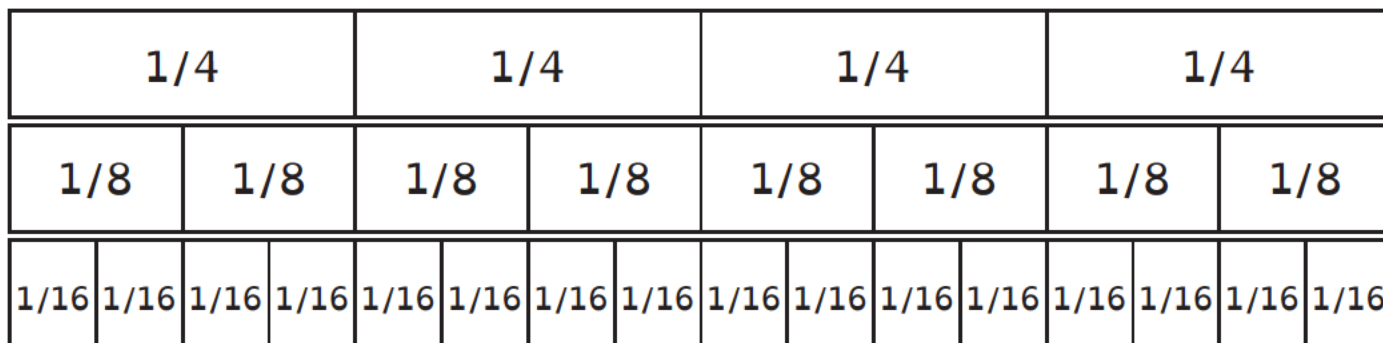
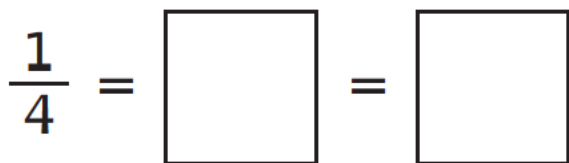
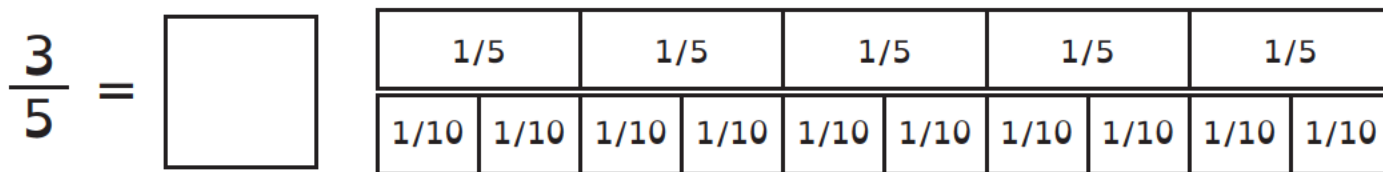
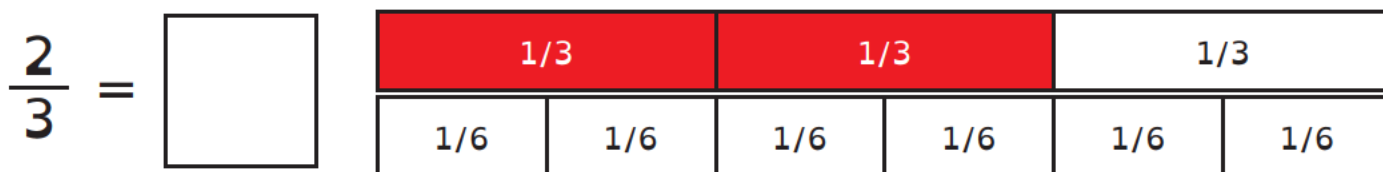
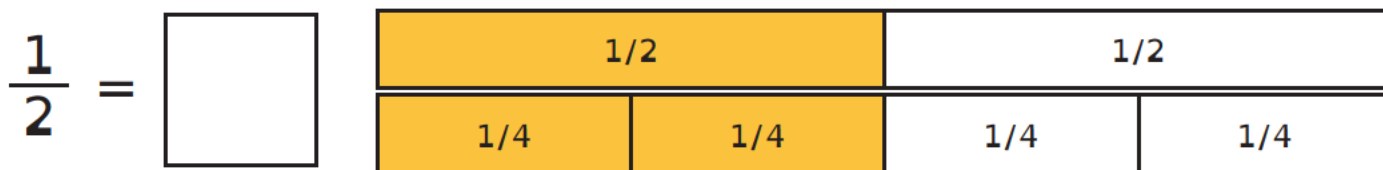
1. There are 450 volcanoes in the Ring of Fire. If Jack visits 15 of these volcanoes each year, how many years will it take him to visit all 450?
 $450 / 15 = 30$
2. About 300,000 people make it to the top of Mt. Fuji during the climbing season. If the climbing season is eight weeks long, on average, how many people make it to Mt. Fuji's summit each week?
 $300,000 / 8 = 37,500$
3. In 2010, the Eyjafjallajokull volcano in Iceland erupted, canceling flights between Europe and North America. In total, 95,000 flights were cancelled during a 6-day period. On average, how many flights were cancelled per day? (Round to the nearest whole number.)
 $95,000 / 6 = 15,833$
4. In December 2014, a new Tonga island was formed by an underwater volcano. 48 months later, pink flowers started growing and birds began nesting on the new island. What month and year did the new island begin to support life?
 $48 / 12 = 4$ years, so $2014 + 4 = 2018$, making the answer December 2018

Name: _____



Equivalent Fractions

Look at each set of fraction bars. Find the equivalent fractions.

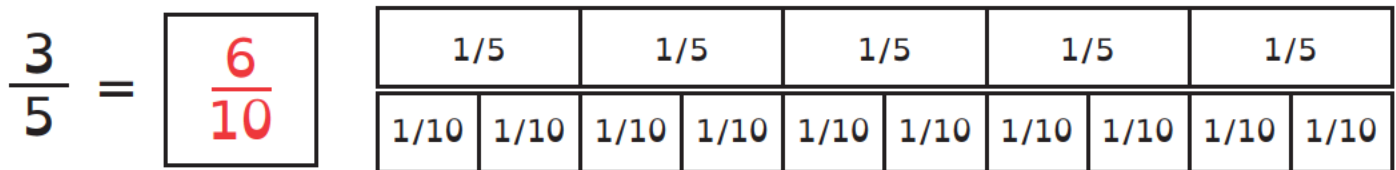
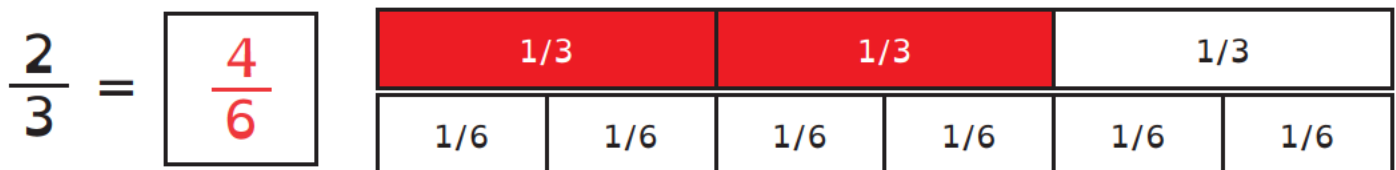
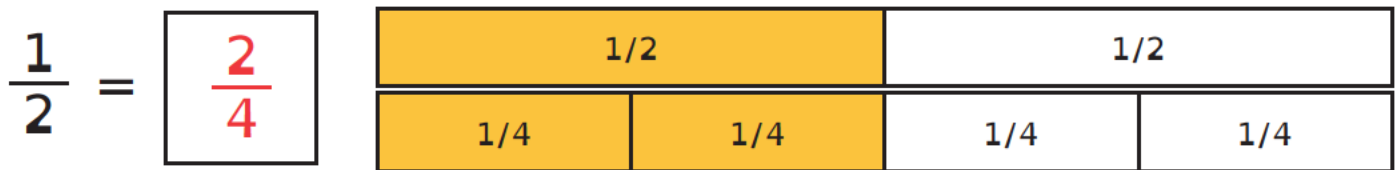


ANSWER KEY

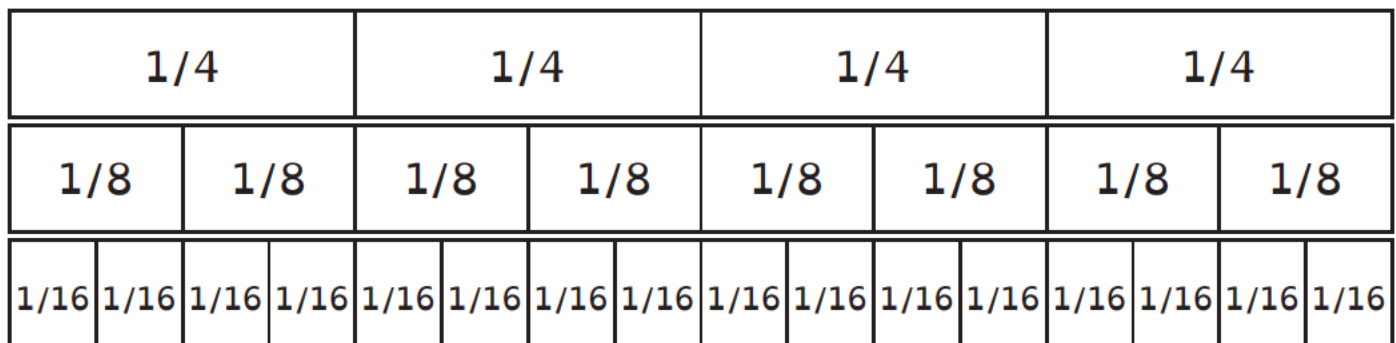


Equivalent Fractions

Look at each set of fraction bars. Find the equivalent fractions.



$\frac{1}{4} = \frac{2}{8} = \frac{4}{16}$



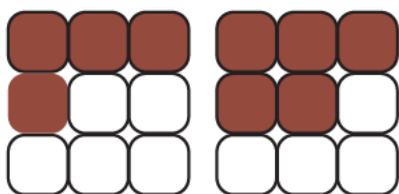
Name: _____



Fraction Addition

(with like denominators)

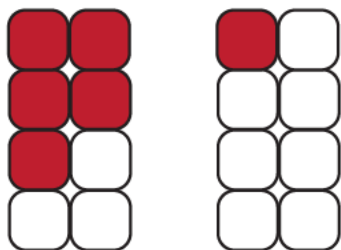
*In the space provided, write the fractions shown by the colored boxes.
Then add them together and find the total.*



$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$



$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$



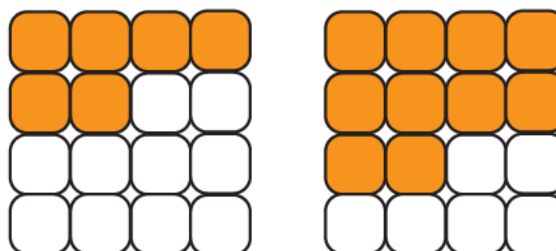
$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$



$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$



$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$



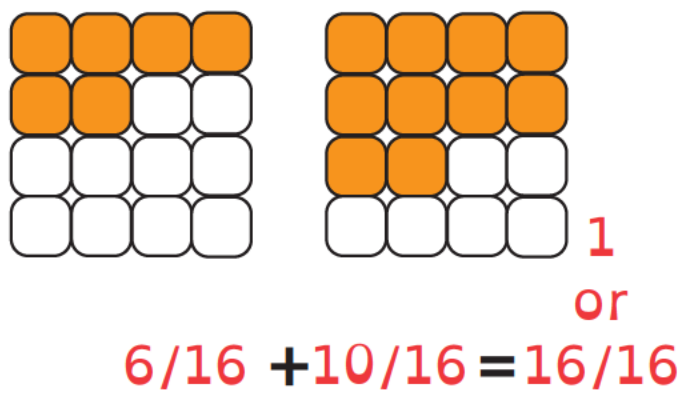
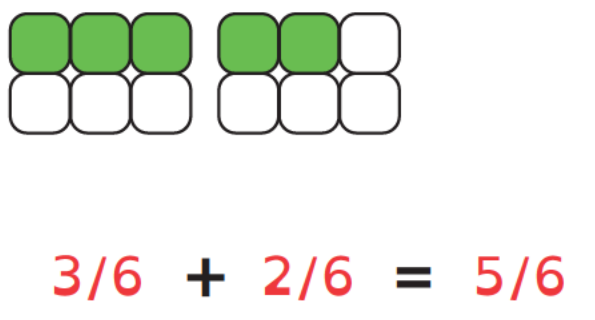
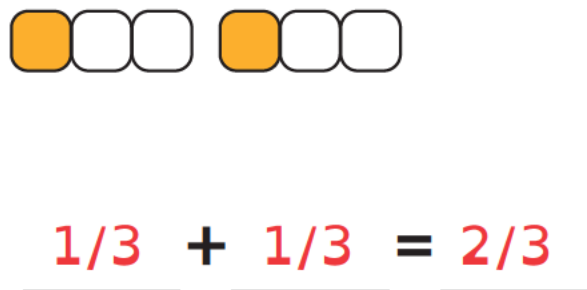
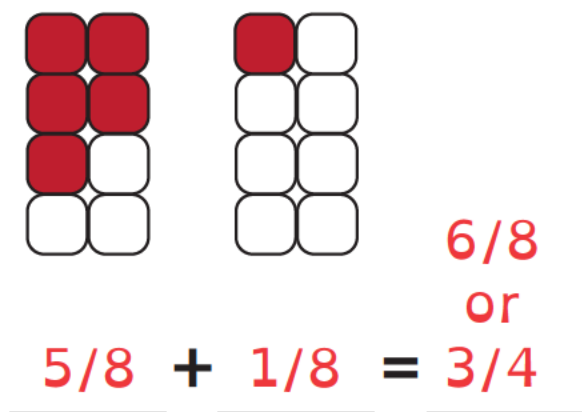
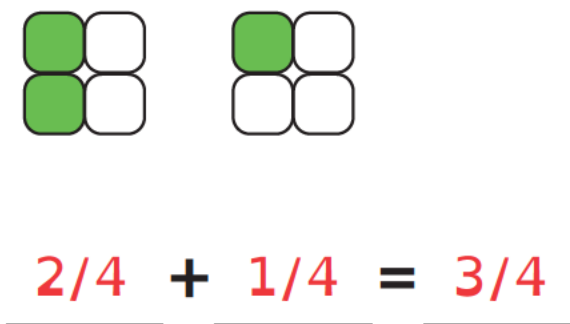
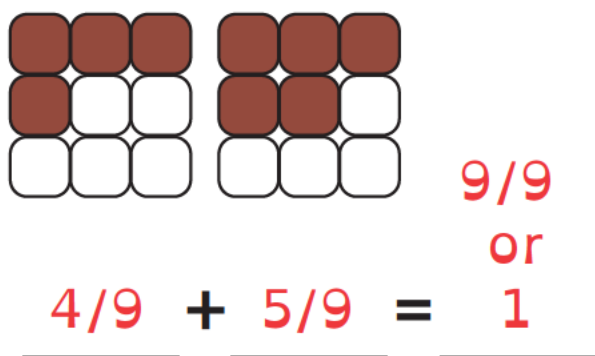
$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

ANSWER KEY



Fraction Addition (with like denominators)

In the space provided, write the fractions shown by the colored boxes.
Then add them together and find the total.

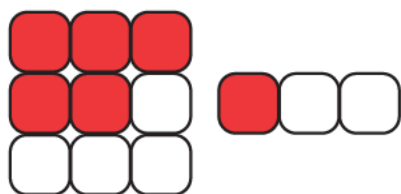


Name: _____

Fraction Addition (with unlike denominators)



*In the space provided, write the fractions shown by the colored boxes.
Then add them together and find the total.*



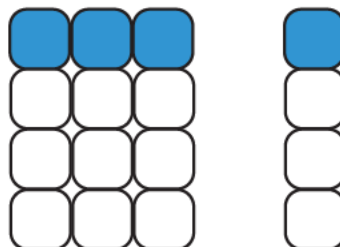
$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$



$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$



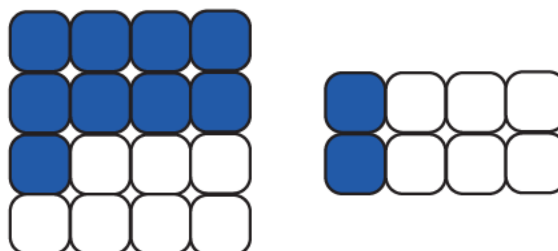
$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$



$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$



$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$



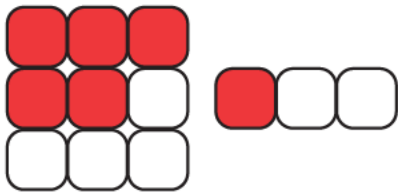
$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

ANSWER KEY

Fraction Addition (with unlike denominators)



*In the space provided, write the fractions shown by the colored boxes.
Then add them together and find the total.*



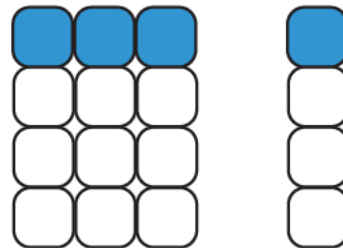
$$\underline{\frac{5}{9}} + \underline{\frac{1}{3}} = \underline{\frac{8}{9}}$$



$$\underline{\frac{2}{4}} + \underline{\frac{3}{8}} = \underline{\frac{7}{8}}$$



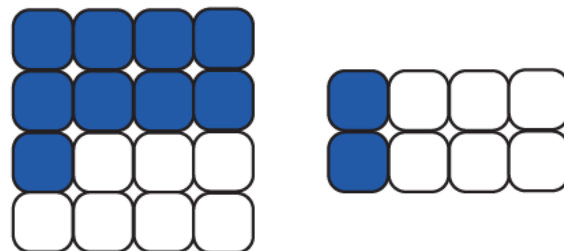
$$\underline{\frac{1}{6}} + \underline{\frac{1}{3}} = \underline{\frac{3}{6} \text{ or } \frac{1}{2}}$$



$$\underline{\frac{3}{12}} + \underline{\frac{1}{4}} = \underline{\frac{6}{12} \text{ or } \frac{1}{2}}$$

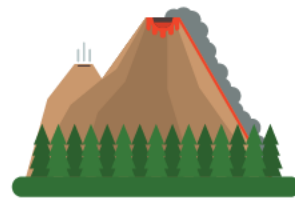


$$\underline{\frac{2}{6}} + \underline{\frac{1}{2}} = \underline{\frac{5}{6}}$$



$$\underline{\frac{9}{16}} + \underline{\frac{2}{8}} = \underline{\frac{13}{16}}$$

Name: _____



Mixed Numbers Practice with same Denominators

Solve the problems below. Write each answer as a mixed number.

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

$$5\frac{2}{5} - 2\frac{3}{5} =$$

$$5\frac{2}{5} \times 2\frac{3}{5} =$$

$$5\frac{2}{5} \div 2\frac{3}{5} =$$

ANSWER KEY

Mixed Numbers Practice with same Denominators



Solve the problems below. Write each answer as a mixed number.

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

8

$$5\frac{2}{5} - 2\frac{3}{5} =$$

$2\frac{4}{5}$

$$5\frac{2}{5} \times 2\frac{3}{5} =$$

$14\frac{1}{25}$

$$5\frac{2}{5} \div 2\frac{3}{5} =$$

$2\frac{1}{13}$

Name: _____



Mixed Numbers Practice with Different Denominators

Solve the problems below. Write each answer as a mixed number.

$$4\frac{1}{4} + 1\frac{2}{5} =$$

$$4\frac{1}{4} - 1\frac{2}{5} =$$

$$4\frac{1}{4} \times 1\frac{2}{5} =$$

$$4\frac{1}{4} \div 1\frac{2}{5} =$$

ANSWER KEY



Mixed Numbers Practice with Different Denominators

Solve the problems below. Write each answer as a mixed number.

$$4\frac{1}{4} + 1\frac{2}{5} =$$

$$5\frac{13}{20}$$

$$4\frac{1}{4} - 1\frac{2}{5} =$$

$$2\frac{17}{20}$$

$$4\frac{1}{4} \times 1\frac{2}{5} =$$

$$5\frac{19}{20}$$

$$4\frac{1}{4} \div 1\frac{2}{5} =$$

$$3\frac{1}{28}$$

Name: _____

Multiplying & Dividing by Powers of 10

$$8 \times 1 = \underline{\hspace{2cm}}$$

$$8 \times 10 = \underline{\hspace{2cm}}$$

$$8 \times 100 = \underline{\hspace{2cm}}$$

$$8 \times 1000 = \underline{\hspace{2cm}}$$

$$60 \times 1 = \underline{\hspace{2cm}}$$

$$60 \times 10 = \underline{\hspace{2cm}}$$

$$60 \times 100 = \underline{\hspace{2cm}}$$

$$60 \times 1000 = \underline{\hspace{2cm}}$$

$$47 \times 1 = \underline{\hspace{2cm}}$$

$$47 \times 10 = \underline{\hspace{2cm}}$$

$$47 \times 100 = \underline{\hspace{2cm}}$$

$$47 \times 1000 = \underline{\hspace{2cm}}$$

$$6000 \div 1 = \underline{\hspace{2cm}}$$

$$6000 \div 10 = \underline{\hspace{2cm}}$$

$$6000 \div 100 = \underline{\hspace{2cm}}$$

$$6000 \div 1000 = \underline{\hspace{2cm}}$$

$$40,000 \div 1 = \underline{\hspace{2cm}}$$

$$40,000 \div 10 = \underline{\hspace{2cm}}$$

$$40,000 \div 100 = \underline{\hspace{2cm}}$$

$$40,000 \div 1000 = \underline{\hspace{2cm}}$$

$$26,000 \div 1 = \underline{\hspace{2cm}}$$

$$26,000 \div 10 = \underline{\hspace{2cm}}$$

$$26,000 \div 100 = \underline{\hspace{2cm}}$$

$$26,000 \div 1000 = \underline{\hspace{2cm}}$$

1. 1,000 pounds of ash and rock fell on the mountain side each hour for 12 hours. How many pounds of ash and rock fell on the mountain side during the course of the 12 hours?
2. 50,000 people hiked to the top of the volcano during the first 100 days after the trail was completed. If the number of people was the same each day, then how many people hiked the trail each day during the first 100 days?
3. The volcanologist made 3 trips per day to the research station every day for 1,000 days. How many total trips did the volcanologist take during those 1,000 days?

ANSWER KEY

Multiplying & Dividing by Powers of 10

$$\begin{array}{l} 8 \times 1 = \underline{8} \\ 8 \times 10 = \underline{80} \\ 8 \times 100 = \underline{800} \\ 8 \times 1000 = \underline{8000} \end{array}$$

$$\begin{array}{l} 60 \times 1 = \underline{60} \\ 60 \times 10 = \underline{600} \\ 60 \times 100 = \underline{6,000} \\ 60 \times 1000 = \underline{60,000} \end{array}$$

$$\begin{array}{l} 47 \times 1 = \underline{47} \\ 47 \times 10 = \underline{470} \\ 47 \times 100 = \underline{4,700} \\ 47 \times 1000 = \underline{47,000} \end{array}$$

$$\begin{array}{l} 6000 \div 1 = \underline{6000} \\ 6000 \div 10 = \underline{600} \\ 6000 \div 100 = \underline{60} \\ 6000 \div 1000 = \underline{6} \end{array}$$

$$\begin{array}{l} 40,000 \div 1 = \underline{40,000} \\ 40,000 \div 10 = \underline{4,000} \\ 40,000 \div 100 = \underline{400} \\ 40,000 \div 1000 = \underline{40} \end{array}$$

$$\begin{array}{l} 26,000 \div 1 = \underline{26,000} \\ 26,000 \div 10 = \underline{2,600} \\ 26,000 \div 100 = \underline{260} \\ 26,000 \div 1000 = \underline{26} \end{array}$$

1. 1,000 pounds of ash and rock fell on the mountain side each hour for 12 hours. How many pounds of ash and rock fell on the mountain side during the course of the 12 hours?

$$1,000 \times 12 = 12,000$$

2. 50,000 people hiked to the top of the volcano during the first 100 days after the trail was completed. If the number of people was the same each day, then how many people hiked the trail each day during the first 100 days?

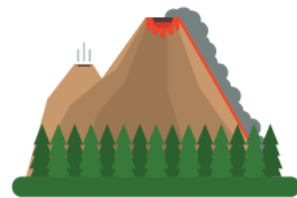
$$50,000 \div 100 = 500$$

3. The volcanologist made 3 trips per day to the research station every day for 1,000 days. How many total trips did the volcanologist take during those 1,000 days?

$$3 \times 1,000 = 3,000$$

Name: _____

Division (no remainders)



$$\begin{array}{r} 56 \\ \div 7 \\ \hline \end{array}$$

$$\begin{array}{r} 30 \\ \div 6 \\ \hline \end{array}$$

$$\begin{array}{r} 16 \\ \div 8 \\ \hline \end{array}$$

$$\begin{array}{r} 20 \\ \div 5 \\ \hline \end{array}$$

$$\begin{array}{r} 20 \\ \div 2 \\ \hline \end{array}$$

$$\begin{array}{r} 81 \\ \div 9 \\ \hline \end{array}$$

ANSWER KEY

Division (no remainders)



$$\begin{array}{r} 56 \\ \div 7 \\ \hline 8 \end{array}$$

$$\begin{array}{r} 30 \\ \div 6 \\ \hline 5 \end{array}$$

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

$$\begin{array}{r} 20 \\ \div 5 \\ \hline 4 \end{array}$$

$$\begin{array}{r} 20 \\ \div 2 \\ \hline 10 \end{array}$$

$$\begin{array}{r} 81 \\ \div 9 \\ \hline 9 \end{array}$$

Name: _____

Division with Remainders



$$\begin{array}{r} 26 \\ \div 5 \\ \hline \end{array}$$

$$\begin{array}{r} 59 \\ \div 6 \\ \hline \end{array}$$

$$\begin{array}{r} 16 \\ \div 3 \\ \hline \end{array}$$

$$\begin{array}{r} 29 \\ \div 9 \\ \hline \end{array}$$

$$\begin{array}{r} 21 \\ \div 2 \\ \hline \end{array}$$

$$\begin{array}{r} 31 \\ \div 4 \\ \hline \end{array}$$

ANSWER KEY

Division with Remainders



$$\begin{array}{r} 26 \\ \div 5 \\ \hline 5 \text{ R}1 \end{array}$$

$$\begin{array}{r} 59 \\ \div 6 \\ \hline 9 \text{ R}5 \end{array}$$

$$\begin{array}{r} 16 \\ \div 3 \\ \hline 5 \text{ R}1 \end{array}$$

$$\begin{array}{r} 29 \\ \div 9 \\ \hline 3 \text{ R}2 \end{array}$$

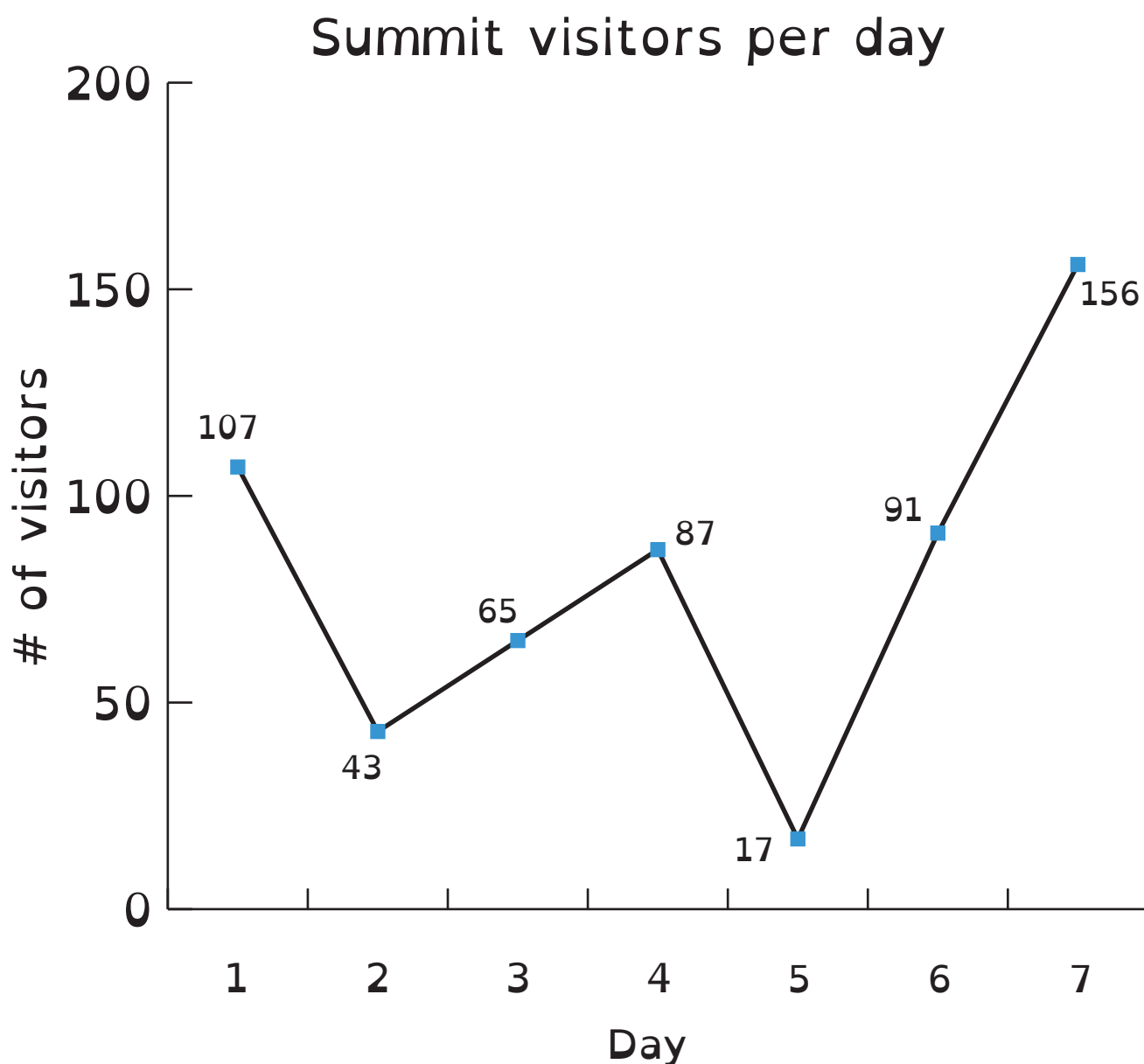
$$\begin{array}{r} 21 \\ \div 2 \\ \hline 10 \text{ R}1 \end{array}$$

$$\begin{array}{r} 31 \\ \div 4 \\ \hline 7 \text{ R}3 \end{array}$$

Name: _____

Reading Line Graphs (pg. 1 of 2)

Use the line graph to answer the questions on the next page.



Name: _____

Reading Line Graphs (pg. 2 of 2)

1. On which day did the most visitors reach the summit of the volcano?
2. On which day did the least visitors reach the summit of the volcano?
3. On how many days did at least 100 visitors reach the summit?
4. There are usually fewer visitors to the summit when it rains. Based on the data, which day during the week did it likely rain?
5. How many visitors made it to the summit altogether during the course of the week?
6. What is the average (mean) number of visitors to the summit each day? Round your answer to the nearest tenth.
7. This data was from winter when there are fewer visitors. During the summer, approximately four times as many people visit the summit. Given this information, how many people are likely to visit the summit on a typical week during the summer?

ANSWER KEY

Reading Line Graphs

1. On which day did the most visitors reach the summit of the volcano?
Day 7
2. On which day did the least visitors reach the summit of the volcano?
Day 5
3. On how many days did at least 100 visitors reach the summit?
2 days (Day 1 and Day 7)
4. There are usually fewer visitors to the summit when it rains. Based on the data, which day during the week did it likely rain?
Day 5
5. How many visitors made it to the summit altogether during the course of the week?
 $107 + 43 + 65 + 87 + 17 + 91 + 156 = 566$
6. What is the average (mean) number of visitors to the summit each day? Round your answer to the nearest tenth.
 $566 \div 7 = 80.9$
7. This data was from winter when there are fewer visitors. During the summer, approximately four times as many people visit the summit. Given this information, how many people are likely to visit the summit on a typical week during the summer?
 $566 \times 4 = 2,264$ visitors

Name: _____

Mean, Median, and Mode (pg. 1 of 2)

In mathematics, we can calculate three different types of averages that give us a typical representation of a group of numbers or data set: mean, median, and mode.

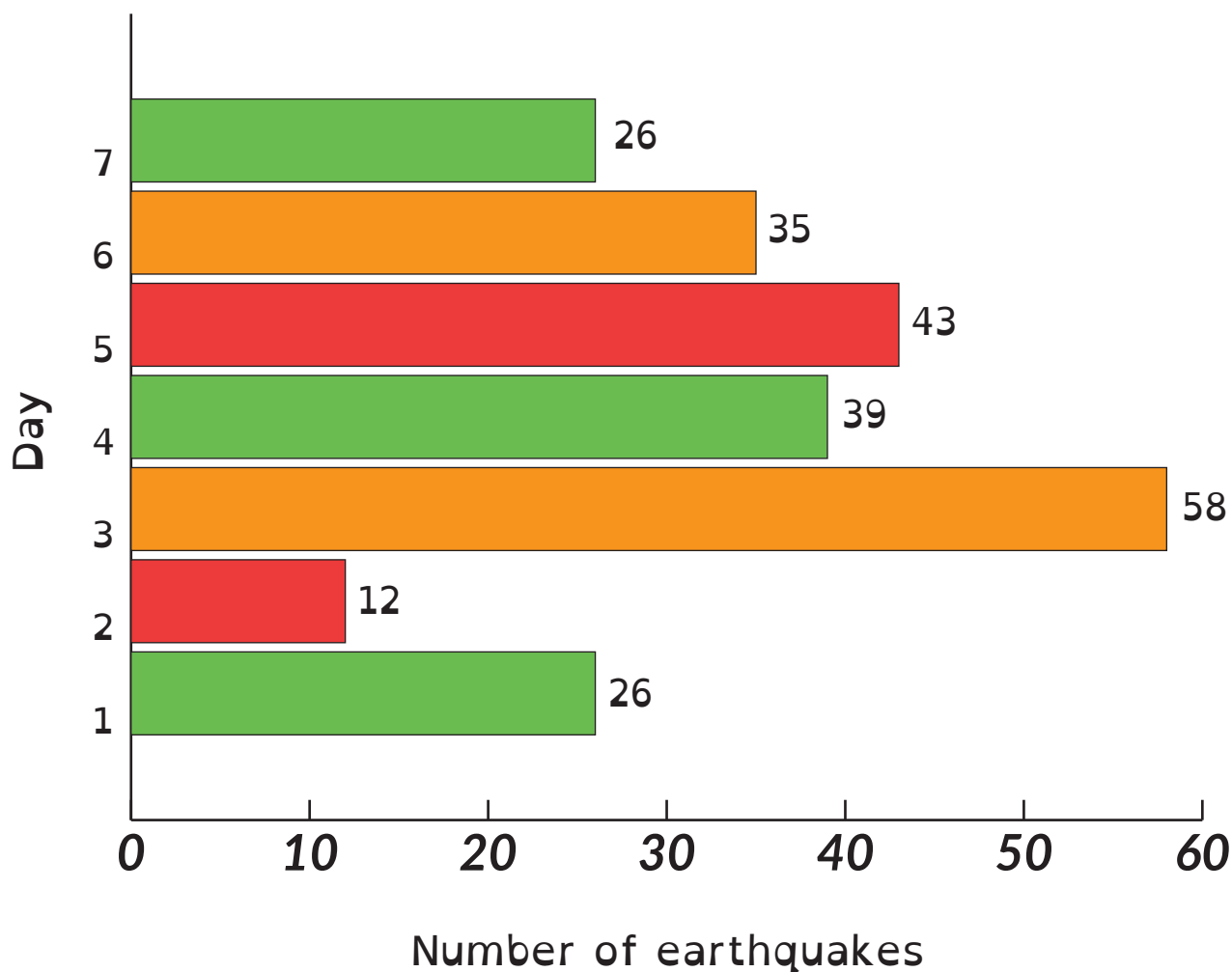
Mean: the sum of all values in a data set divided by the number of values in the set.

Median: the middle number in a data set.

Mode: the most common number in a data set.

Use the bar graph to answer the questions on the next page.

**# of Earthquakes
Near Active Volcanoes**



Name: _____

Mean, Median, and Mode (pg. 2 of 2)

1. Calculate the *mean* number of earthquakes per day.

Start by calculating the total sum of the earthquakes that occurred during the seven day observation period.

Then divide that sum by the number of days included in the data set (7) to get the mean. Round to the nearest tenth.

2. Calculate the *median* number of earthquakes per day.

Start by writing all the numbers in numeric order.

Then find the number in the middle to get the median number.

3. Calculate the *mode* number of earthquakes per day.

Refer up above where you wrote the numbers in order. Find the number that occurred the most to get the mode. If no number occurred the most, write "no mode."

ANSWER KEY

Mean, Median, and Mode

1. Calculate the *mean* number of earthquakes per day.

Start by calculating the total sum of the earthquakes that occurred during the seven day observation period.

$$26 + 35 + 43 + 39 + 58 + 12 + 26 = 239$$

Then divide that sum by the number of days included in the data set (7) to get the mean. Round to the nearest tenth.

$$239 / 7 = 34.1$$

2. Calculate the *median* number of earthquakes per day.

Start by writing all the numbers in numeric order.

12 26 26 (35) 39 43 58

Then find the number in the middle to get the median number.

35

3. Calculate the *mode* number of earthquakes per day.

Refer up above where you wrote the numbers in order. Find the number that occurred the most to get the mode. If no number occurred the most, write “no mode.”

The number 26 appears twice. The mode is 26.