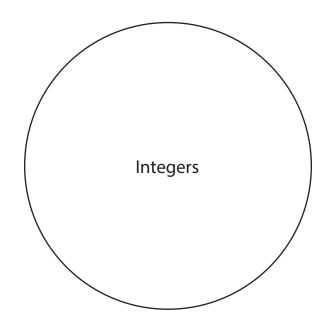
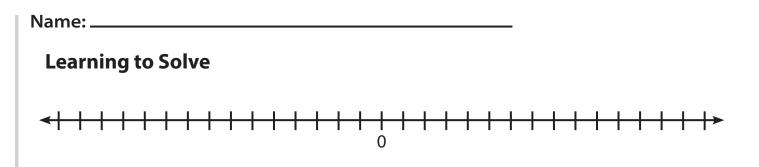
					×	+		-		×		*		+	
62					÷		+		+		_		×		
						+		-		×		• •		+	
-8 57							÷		+		_		×		
								-		×		÷.	×	+	_
									+	×			^	+	_
									÷				×		_
										×				+	
27											_		×		_
		1.15								×		*		+	
		te								9	-	<u>.</u>	×	+	_
7										10	-		×		_
				-	7.41					-17				+	-
3										Ŋ	-		×		
1 ~									Q	-1/	_	÷		+	
13									0	3	-		×		
23								.38		K		÷.	X	+	
	-24			20		_				//			~		
33	27								P	1	н				
	-34	SI S	tuc	ler		3	\mathbf{O}			K			11		
43	-44						-								
-53		-55	-2	0	.1	-v									
	-54		-60	6	-67	78/j			+	×	_	<u>.</u>	×	+	_
-63	<u> </u>	65	-00		1	T				<u>^</u>		· ·		Ť	

Name	
Teacher	
Period	

Warming Up

Make a semantic map of everything you know about integers.



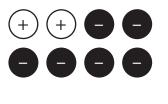


= +1

Name: _

Trying It on Your Own

1. What is the value modeled in this diagram? - = -1



a. 8 **b.** 4 **c.** -4 **d.** -6

2. John said it is not possible to model –4 using precisely 10 2-colored chips. Is John's statement true?

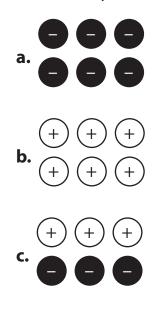
a. No, his statement is not true. You can model –4 with 4 negative chips and 3 zero pairs for a total of 10 chips.

b. No, his statement is not true. You can model –4 using any number of chips.

c. Yes, his statement is true. You only need 4 2-colored chips to model –4. Using more chips would change the value.

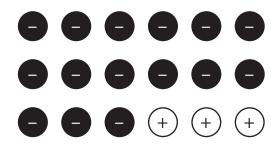
d. Yes, his statement is true. You need 4 negative chips but to use more chips would mean that you add in an odd number of chips.

3. Jasmine was told to model +6, using 2-colored chips. Which diagram shows +6 modeled correctly?



d. Both b and c

4. Maria modeled +12 with two 2-colored chips. Another student said that her model was incorrect. What does Maria need to change so that the model for +12 is correct. Select the best answer.

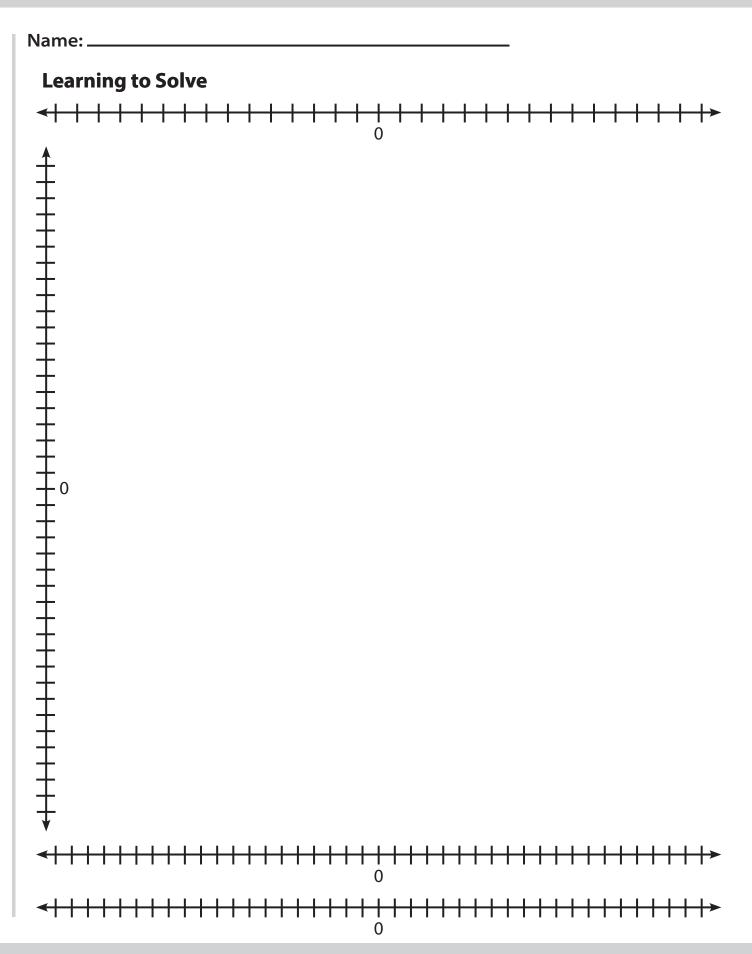


a. Maria needs to change 12 of the negative 2-colored chips to positive 2-colored chips.

b. Maria doesn't have to change anything. She has 12 modeled with 3 zero pairs.

c. Maria needs to remove the 3 zero pairs because they change the value of the 12 2-colored chips not paired.

d. Maria needs to add 12 more positive 2-colored chips below the negative 2-colored chips.



Name: .

Practicing Together

1. Compare –16 and |15|.

Students wrote that –16 is greater than |15| because 16 is 1 more than 15. Are the students correct? Why or why not?

2. Compare |–27| and –5.

Students wrote that -5 is greater than the absolute value of -27 because -5 is closer to 0. Are the students correct? Why or why not?

3. Which of these integers is greatest? -78, 0, |-12|, |24|

Students thought that -78 was the greatest of the 4 integers. Did the students select the greatest integer? Why or why not?

4. Which of these integer is the least? -29, |-87|, -82, -100

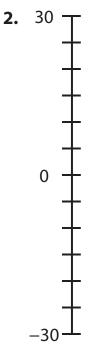
Students thought that –29 was the least integer. Did the students select the least integer? Why or why not?

5. Order the integers from greatest to least: 35, |14|, 75, -12

Students answered: 75, -12, |14|, 35. Did they answer correctly? Why or why not?

Trying It on Your Own

- 1. What is another way to describe |7|?
 - **a.** It is neither positive nor negative; it has no value.
 - **b.** It is negative.
 - **c.** It is the opposite of the number.
 - **d.** It is 7 units from 0.



The morning temperature in New York in January was –5°. The temperature rose 10° by noon. Using the number line above, what was the temperature at noon?

a. 10° **b.** –15° **c.** 5° **d.** –5°

- **3.** Jim said, "|-8| is less than |8|." Do you agree with Jim? Why or why not?
 - **a.** Yes, I agree with Jim because –8 is less than 8.

b. Yes, I agree with Jim because negative numbers have are farther to the left on a number line.

c. No, I do not agree with Jim because the absolute value is the same for both integers.

d. No, I do not agree with Jim because you cannot compare absolute values of numbers.

4. Ralph ordered the following integers from least to greatest. Is he correct?

0, 39, -54, |-87|

- **a.** No, he is incorrect because –54 is less than the other numbers.
- **b.** Yes, he is correct because 0 and 39 are less than 54 and 87.

c. Yes, he is correct because he arranged the numbers in order by absolute value.

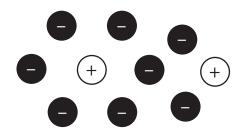
d. No, he is incorrect. The correct order is |-87|, 39, -54, 0.

Practicing Together



1. Rob used a drawing of chips to show that 6 + (-5) = 1. Draw what his drawing may have looked like.

2. Your teacher showed this chip model.



What is the value of the chips?

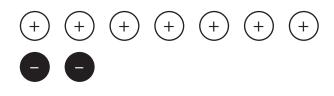
Write an addition equation represented by the chips.

Draw a picture and write a different addition equation shows a sum of -6.

Trying It on Your Own

Key: (+)

1. Monica thinks that her diagram represents -2 + 7 = 5. Do you agree?



a. No, her diagram represents 2 + 7 = 9. She had 7 positive chips and added 2 negative chips. The result is 9 chips.

b. Yes, because 4 of the chips form zero pairs. The remaining chips are equal to +5.

c. Yes, it does represent the equation, but the answer should be 7 because you have to take away the 2 negative chips.

d. No, because she should have started with 5 positive chips and then added in 2 negative chips to make 2 zero pairs.

2. Using 9 chips, what is an equation that Monica could represent?

a. 0 + 0 = 9 **b.** 5 + (-4) = 9 **c.** -7 + 2 = 5**d.** 5 + (-4) = 1

Name: _______
Select the correct sum. You may use 2-colored chips or drawings to help you solve.

$$3. -4 + (-11) = _______a. -7$$

 $b. -15$
 $c. 7$
 $d. 15$
 $4. -9 + 5 = ______a. -4$
 $b. 4$
 $c. -14$
 $d. 14$

Practicing Together

Model the following problems, using chips or pictures.

1. 12 – 11 = _____

2. -1 -14 = _____

3. 15 – (–9) = _____

4. -8 - (-11) = _____

Trying It on Your Own

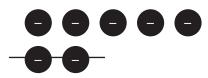
Select the correct difference. You may use chips or drawings to help you solve.

1.
$$-13 - (-9) =$$

a. 22
b. 4
c. -22
d. -4
2. $5 - 11 =$ _____
a. -6
b. 6
c. 16
d. -16

Look at the model below each equation. Was the equation modeled correctly? Why or why not?

3. -7 - 2 = 5



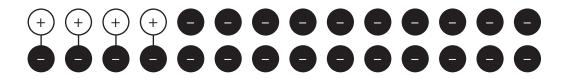
a. Yes, this is the correct diagram and the correct answer.

b. No, this diagram is incorrect. You have to add 2 negative chips, not remove them. The answer should be –9.

c. No, No, this diagram is incorrect. You need to first add 2 zero pairs to be able to remove +2. The answer should be –9.

d. No, this is the correct diagram, but the answer is –5, not +5.

4. 4 – 20 = –16



a. No, this is not the correct diagram. The negative chips should all be positive.

b. Yes, this is the correct diagram, but the negative chips should be in a straight line.

c. Yes, this is the correct diagram. There are 4 positive chips and 20 negative chips with 4 zero pairs created.

d. No, this diagram is incorrect. You need to make zero pairs to be able to remove 20, resulting in an answer of –16.

Practicing Together

Complete the Magic Square so that the sum of each row, column, and diagonal equals 0. Use numbers: 1, 2, 4, -1, -2, -3, -4.

	3
0	

Complete the Magic Square so that the sum of each row, column, and diagonal equals 6. Use numbers: 0, 1, 3, 4, 5, 6, -2.

	2	
-1		

Trying It on Your Own

Select the correct sum or difference. You may use 2-colored chips, drawings, or your Generalization sheet to help you solve.

```
1. -7 + (-4) = \underline{\qquad}
a. 11

b. -11

c. -3

d. 3

2. 3 - (-10) = \underline{\qquad}
a. -13

b. -3

c. 3

d. 13
```

3. Riley said that she could use fact families to find the missing addend for the equation

 $2 + ___ = -6$. She said the missing addend was 8. Is she correct?

a. No, she is incorrect. You can use fact families to solve, but the correct missing addend is –8.

b. Yes, she is correct.

- **c.** No, she is incorrect. The correct missing addend is +4 because -6 2 = +4.
- **d.** No, she is incorrect. If she used fact families, she would have subtracted 2.

4. Kennedy found a missing value in a problem. She said the missing value was –12. For which equation is –12 the missing value?

a.
$$+9 = -3$$

b. $-9 = -3$
c. $5 + = 7$
d. $5 - = 7$

Learning to Solve

1. Morgan was just learning how to play golf. To help them learn, the Brushy Creek golf course started each new golfer with a score of –4, or 4 under par. Morgan practiced on the course for 5 days. Her score, without the –4, is shown in the table. What is the score when you add in the –4?

Day	Score	Final Score for Day Actual score + -4 = final score
Monday	-2	
Tuesday	-1	
Wednesday	-3	
Thursday	0	
Friday	1	

	Actual	score	+ -4	= final	score
--	--------	-------	------	---------	-------

2. Robert was a contestant on a student game show. His missed some questions, so his score was –200. He then correctly answered a 500-point question about cars in the 1900s. What is Robert's current score?

Practicing Together

1. Complete the table.

Starting number	Starting number – 3 + 2
-2	
-1	
0	
1	
2	

2. There was a big golf tournament for middle school students just learning how to play. Each student began at 2 under par, meaning they started the tournament with a score of -2. Complete the chart to show each student's score at the end of the tournament.

Students	Score	Score + (–2)
Karen	13	
Matt	-4	
Cathy	-8	
Hans	18	
Rob	1	

Who had the best score? (Remember, the lower the score—or farther below 0, or par—is best.)

Who had the worst score?

3. Ronald was visiting New Orleans, which is 8 feet below sea level (–8). He took off in his helicopter and ascended 600 feet. What is Ronald's elevation now?

How did you solve the problem?

Trying It on Your Own

starting number + 9 = final number

Starting Number + 9	Final Number
-9	0
-8	1
-2	?
8	17
9	18
6	15

Use the table above to answer questions 1 and 2.

1. What is the missing value after adding 9 to the starting number -2?

- **a.** –11
- **b.** –7
- **c.** 7
- **d.** 11

2. Using the same equation, starting number + 9 = final number, what would the value and sign of the starting number need to be to result in a sum, or final number, with a negative sign?

a. –10 or less

b. +10 or greater

- c. Would never happen because the final number is always positive
- d. Not enough information to determine

3. A scuba diver was 30 feet below sea level. He descended 40 more feet below sea level. How deep did the scuba diver swim?

a. -10, or 10 feet below sea level

b. 10, or 10 feet above sea level

c. Not enough information to solve

d. -70, or 70 feet below sea level

4. A submarine was 500 feet below sea level. It ascended 325 feet. What is its current position?

a. -175, or 175 feet below sea level

b. 175, or 175 feet above sea level

c. -825, or 825 feet below sea level

d. 825, or 825 feet above sea level

Warming Up

Temperatures					
Austin, Texas	78°				
Kansas City, Missouri	48°				
Orlando, Florida	96°				
Anchorage, Alaska	–23°				
Helena, Montana	–5°				

At the North Pole, the temperature is 10 degrees lower than in Anchorage, Alaska. What expression could be used to represent the temperature?

What is the temperature at the North Pole?

Practicing Together

Compare each expression and explain whether the equation is true.

1. -8 + (-15) = 11 + 12Is this equation true? Explain.

2. $72 - 2 \neq -45 + 115$ Is this inequality true? Explain.

3. 7 – (–21) < –48 + 76 Is this inequality true? Explain.

4. Write an expression to complete this equation.

_____= -6 - (-4)

Trying it on Your Own

1. A student wrote the following inequality. Is she correct? If not, what mistake did she make?

$$23 + (-30) < -12 + 3$$

a. No, she is incorrect. The first expression equals –7 and the second expression equals –9. –7 is greater than –9 because it is closer to 0.

b. Yes, she is correct. The first expression equals –7 and the second expression equals –9. –9 is greater than –7.

c. No, she is incorrect. The first expression equals 53 and the second expression equals 15. 53 is greater than 15.

d. The student cannot use a less than symbol. She should have used an unequal sign. The only way this inequality is true is if the less than sign is changed.

2. Select the correct equation in which the expression on the right and the expression on the left equal –17.

-17 = -17

=

a. 10 + (-7) = 27 - 10 **b.** -24 - (-7) = -10 + (-7) **c.** 10 + 7 = 11 + 6**d.** 10 + (-7) = 27 - 10

For 3 and 4, what sign, = or \neq , should be inserted into each inequality?

3. 85 + (-38) 83 - 91

a. =, because both expressions are equal.

b. \neq , because the first expression equals 47 and the second expression equals -8.

c. \neq , because the first expression equals 123 and the second expression equals 8.

d. \neq , because the expressions cannot be simplified.

4. -3 - |-13| _____ -4 + (-12)

a. \neq , because the first expression equals –16 and the second expression equals –8.

b. =, because both expressions equal –16.

c. \neq , because the expressions cannot be solved.

d. \neq , because the first expression equals –10 and the second expression equals –16.

Learning to Solve

1. Debbie had \$213 in her checking account. She wrote checks for \$23, \$126, and \$67. The bank called her and said she had overdrawn her account, meaning she spent more money than she had in the bank. What was her new balance?

2. A scuba diver was 430 feet below sea level. He rose at a rate of 12 feet per minute. What was the depth of the diver after 9 minutes?

3. The price of a share of stock started the day at \$24. During the day, it went up \$3, down \$4, down \$7, and up \$6. What was the price of a share of the stock at the end of the day?

Trying it on Your Own

1. A monkey sat on a tree that is 32 feet above the ground. He swung up 14 feet, ate 7 bananas, and then climbed up 4 more feet. How far off the ground was the monkey?

- **a.** 57 feet
- **b.** 50 feet
- **c.** 22 feet
- **d.** 42 feet

2. It was super cold yesterday. In the morning, the temperature was 6°, and then it decreased by 15° at noon! It stayed at this temperature for 4 hours and then rose by 8°. What was the temperature at 4 p.m.?

a. -1° **b.** -17° **c.** -24° **d.** 1°

3. A research team aboard an underwater research vessel descended 1,500 feet beneath the surface. They then rose 525 feet and descended again 350 feet. What is the vessel's last position? Select the expression that could be used to solve.

a. 1,500 - 525 - (-350) **b.** -1,500 + 525 - 350 **c.** -1,500 - 525 - (-350) **d.** -1,500 + 525 + 350

4. The overnight temperature at the Arctic Circle was –14°, but the temperature rose during the day. At its highest, the temperature was –6°. How many degrees did the temperature increase during the day?

a. 20° **b.** -8° **c.** -20° **d.** 8°

Wrapping It Up

Complete the Magic Square so that the sum of each row and column equals 0. Use numbers: -4, -3, -2, 1, 2, 3, 4.

	0	
-1		

Warming Up

Carmen said, "15 - (-18) = -3 because you add a negative number to find the difference." Do you agree with Carmen? Why or why not?

Name	:						
Lear	ning t	o Solv	e				
1.	4	×	2	=	8		
_		_ × _		_ = _		_	

Learning to Solve

1. Find the products and answer the questions.

6 × 6 = _____

6 × 5 =

6 × 4 = _____

Patterns: What pattern do you notice about the factors in these problems?

What pattern do you notice about the products?

Both factors are positive. What is the sign of the product?

2. Continue the pattern for both the factors and the products. Write the next 4 equations.

- $6 \times 3 = 18$
- 6 × 2 = 12
- 6 × _____ = _____
- 6 × _____ = ____
- 6 × _____ = _____
- 6 × _____ = _____

What pattern do you notice about the products?

When both factors are positive, what is the sign of the product?

When one factor is positive and the other factor is negative, what is the sign of the product?

3. Find the products and answer the questions.

-9 × 2 = _____

-9 × 1 = _____

-9 × 0 = _____

Patterns: What pattern do you notice about the products?

When one factor is negative and the other factor is positive, what do you notice about the product?

When one factor is negative and the other factor is 0, what do you notice about the product?

Continue the pattern for both the second factor and the product for the next 4 equations.

 $-9 \times _ = _$ $-9 \times _ = _$ $-9 \times _ = _$ $-9 \times _ = _$

What do you notice about the products?

Look at the first factor. What is the sign of the integer?

Look at the second factor. What is the sign of the integer?

Look at the products. What is the sign of the integer?

What do you notice about the sign of the product when both factors are negative?

What do you notice about the sign of the product when 1 factor is negative and 1 factor is positive?

Trying It on Your Own

1. Ming stated that the product of -3 and 9, or -3(9), was 27. Is she correct? Why or why not?

a. No, she is incorrect because a negative integer times a positive integer gives a negative product.

b. Yes, she is correct because first you multiply and then you take the sign of the larger number. So 3 times 9 is 27 and 9 is larger, so the product is positive.

c. Yes, she is correct because when you multiply a positive and a negative, the product is always positive.

d. No, she is incorrect. When the factors have different signs, you always use the sign of the first factor as the sign of the product.

2. What is the product of 5×-4 ? Select the answer choice with the correct product and correct reason for that answer.

a. The product is 20 because 5 is larger than 4.

b. The product is –20 because the first number is negative.

c. The product is 20 because when you multiply a positive and a negative, the product is always positive.

d. The product is –20 because when you have 5 groups of –4, you get the product of –20.

- **3.** Which pairs of integers both have a product of -30? **a.** (5, 6) and (-2, 15) **b.** (-6, -5) and (-10, -3)
 - **c.** (5, 6) and (30, 1)
 - **d.** (–15, 2) and (–3, 10)

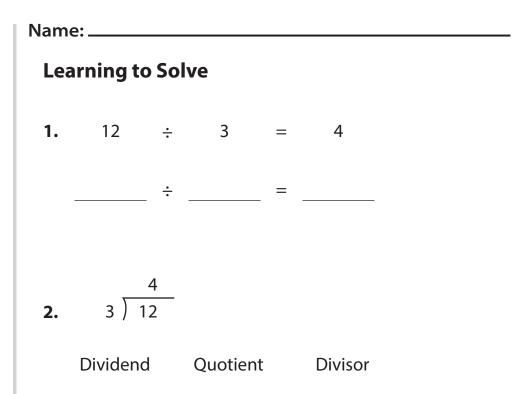
4. Jessica wrote the product is -24. Which multiplication expression did she simplify?

a. -3(-8) **b.** 2(-12) **c.** 2(12) **d.** -2(-12)

Wrapping It Up

Using your knowledge of fact families, determine whether each equation is true or false.

- **1.** $-16 \div (-4) = 4$
- **2.** 16 ÷ (−4) = 4
- **3.** 16 ÷ 4 = 4
- **4.** $-16 \div 4 = -4$



3. Find the quotients and answer the questions.

36 ÷ 6 = _____

30 ÷ 6 = _____

24 ÷ 6 = _____

Patterns: What pattern do you notice about the dividends?

What pattern do you notice about the quotients?

What is the relationship between the sign of the quotient and the signs of the dividend and divisor?

What do you notice about the relationship between the sign of the quotient and the signs of the dividends and the divisors?

4. Continue the pattern for the dividend and the quotient. Write the next 4 equations.

 $12 \div 6 = 2$ $6 \div 6 = 1$ $\div 6 = _$ $\div 6 = _$

In thinking about the signs, what pattern do you notice?

5. Solve the equations and answer the questions.

10 ÷ (-5) = _____

- 5 ÷ (-5) = _____
- $0 \div (-5) =$

Patterns: What is the sign of each dividend?

What is the sign of each divisor and quotient?

What pattern do you notice about the dividend?

6. Continue the pattern for the dividend and the quotient. Write the next 4 equations.

What are the signs of the dividends?

What are the sign of the divisors?

What are the sign of the quotients?

Trying It on Your Own

1. Kevin stated that the quotient of 27 and -9, or $27 \div -9$, was -3. Is he correct? Why or why not?

a. Yes, he is correct because –3 is closer to –9.

b. Yes, he is correct because 27 divided by 9 is 3 and a positive integer divided by a negative integer results in a negative quotient.

c. No, he is wrong because you take the sign of the greater number and 27 is greater than –9, so the quotient should be +3.

d. No, he is wrong because anytime you divide a positive integer by a negative integer, the quotient is positive.

2. What is the quotient of $-20 \div 5$? Select the answer choice with the correct quotient and correct reason for that answer.

a. The quotient is –4 because a negative integer divided by a positive integer results in a negative quotient.

b. The quotient is –4 because the first number is negative.

c. The quotient is 4 because the dividend, 5, is closer to the answer and is a positive integer.

d. The quotient is 4 because a negative integer divided by a positive integer results in a positive quotient.

3. Dean divided 2 integers. His quotient was –3. Which of the following division problems did he solve?

a. 48 ÷ (−16) **b.** − 12 ÷ −4 **c.** 60 ÷ 20 **d.** −24 ÷ (−8)

4. Averi wrote -2 as the quotient. What expression was she solving?

a. −30 ÷ (−15) **b.** 30 ÷ (−15) **c.** 30 ÷ 15 **d.** −15 ÷ 30

Learning to Solve

1. Sherman's football team lost 8 yards on each of 3 consecutive plays. How many total yards did they lose?

2. The length of an island is shrinking at a rate of 19 inches per year. How long will it take for the island to shrink 209 inches?

Practicing Together

1. A submarine dove 852 feet. It rose at a rate of 32 feet per minute. What was the depth of the submarine after 12 minutes?

2. The height of water in a tank is 24 inches. Each week, the height decreases by 2 inches. What is the height of the water after 7 weeks?

3. It was a chilly weather day today. The temperature started at -7° in the morning and then dropped to -15° at noon. It stayed at -15° for 3 hours and then rose 6° by 5 p.m. What was the temperature at 5 p.m.?

0

4. A hiker was climbing Mount St. Helens. He climbed for 3 days. Each day, he climbed a total of 113 feet. If he started at the base camp, which was 5 feet, what was his elevation at the end of the third day?

Trying It on Your Own

1. The price of a stock for a new cereal started at \$15. It increased \$3 each day for 8 consecutive days. What was the value of the stock after 8 days?

- **a.** \$24
- **b.** \$36
- **c.** \$39
- **d.** \$53

2. The value of a car is decreasing at a rate of \$225 per year. How many years will it take for the car's value to decrease a total of \$1,350? Select an expression that could be used to solve.

a. 1,350 ÷ 225 **b.** 1,350(225) **c.** 1,350 + 225 **d.** 225 ÷ 1,350

3. Kathleen had to solve the following word problem. A group of hikers are descending down a mountain at a rate of 200 feet per hour. What is the change in elevation after 6 hours? Kathleen wrote that the change in elevation was about 33 feet. The teacher said that this answer was wrong. What did Kathleen do wrong?

a. She divided 200 by 6, but because the hikers were descending, the answer should be about –33, or 33 feet below.

b. She should have added 200 and 6. The correct answer should be 206.

c. She should have multiplied –200 x 6. The answer is –1,200 feet.

d. Her answer is almost right, but she divided incorrectly. The correct answer is 33.33 feet.

4. The population of a small town is losing 312 people per year. How long will it take for the population to decrease by 2,496 people?

- a. 6.5 years
- b. 8 years
- c. 7 years
- **d.** 7.5 years

Name:	
Learning to Solve	
$2 + 10 \div 5(1) + (-4) =$	
$-9 \cdot 3 + (5 - 2) \div 1 =$	

Practicing Together

Simplify each expression using order of operations.

1. $2 \cdot (-6) \div (-6 \times 2) =$

2. -4 + 7 - (-1) + 9 = _____

3. (6 − 10) ÷ (4 ÷ −2) = ____

4. 1 × (-3)(-3 + 2) = _____

Trying It on Your Own

Using order of operations, simplify these expressions.

```
1. 5 \div 1 + 8(-8)

a. 59

b. -59

c. -14.4

d. -13

2. 5 + (-7) - (-3) + 2

a. -7

b. -3

c. 7

d. 3
```

3. Sophia simplified the expression (6 – 10) ÷ (4 ÷ (–2)). Her answer was –8. Is she correct? **a.** Yes, she is correct.

b. No, she is incorrect. The answer should be -2 because 6 -10 is equal to -4 and 4 divided by -2 is -2.

c. No, she is incorrect. The answer should be +2 because 6 – 10 is equal to -4 and 4 divided by -2 is -2.

d. No, she is incorrect because she did not use order of operations correctly. Division is always before addition or subtraction. So 4 divided by -2 is -2. Then 10 divided by -2 is -5. The last step is 6 - 5 and the correct answer or difference is 1.

4. What is the first step in the order of operations to simplify the expression 3(9) + (-5 - (-8)) + 13?

- **a.** -5 (-8) because it is in parentheses.
- **b.** 3(9) because it is first when you read the problem from left to right.
- c. 3(9) should be done first because it will be easier to add 27 to 3.
- **d.** –5 (–8) because it will make it easier to add 13.

Name: Example (always, sometimes, When true never) A negative integer divided by a negative integer equals a negative integer. A positive integer divided by a negative integer equals a positive integer. A negative integer minus a negative integer equals a negative integer. A positive integer times a negative integer equals a negative integer. A positive integer plus a negative integer equals a negative integer. A negative integer plus a negative integer equals a positive integer. A positive integer plus a positive integer equals a positive integer. Generalization Complete the table.

Learning to Solve

Fill in the blanks to help you remember the order of operations.

P:	
E: _	
	 _
D:	 -
A:	
S:	

1. 4(-6 + 5) = _____

2. A store sells ribbons for \$3 each and pins for \$2. Cora buys 3 ribbons and a pin. Jack buys 2 ribbons and 5 pins. Find the total amount spent.

Practicing Together

1. Ami and 2 of her friends went to the movies. Each ticket cost \$6. They also bought 2 large popcorns at \$7 each and 3 bottles of water at \$3 each. How much change did they get from \$50?

Use order of operations to simplify.

2. (10 – 4) ÷ (1)2 =

3. -9 + (-7) - (-5 + 2) = _____

Trying It on Your Own

1. Paul is on a snow ski vacation. He didn't go skiing on Monday because the temperature of –6 degrees was too cold. On Tuesday and Wednesday, the temperature dropped another 5 degrees each day. Thursday, the sun came out and the temperature increased by 30 degrees. What was the temperature on Thursday?

- a. 26 degrees
- b. 14 degrees
- c. 46 degrees
- d. 34 degrees

2. Carol said that the solution to -3(-4+1) + 10 was 1. Is her answer and explanation correct?

- **a.** No, the answer is 19, because -4+1 = -3, -3(-3) = 9, and 9+10 = 19.
- **b.** No, the answer is 25, because -4+1 = -5, -3(-5) = 15, and 15+10 = 25.

c. Yes, the answer is 1, because -4+1 = -3, -3(-3) = -9, and -9+10 = 1.

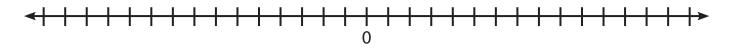
d. No, the answer is -5, because -4+1=5, -3(5) = -15, and -15+10=-5

Student Booklet	Integers:	Lesson 1
Name:		
 3. Audrey had -\$85 in her checking account. She made a deposit so \$25 in the bank. What was the amount of the deposit? a. \$50 b. \$100 c. \$60 	o that she no	w has
d. \$110		
4. Use order of operations to simplify. 6 + -8(2) - 3		
a. –13		
b. –7 c. –19 d. 25		
U. ZJ		

Warming Up

1. Define "integer":

2. Model integers on the number line: -4, 0, 4, -6, 3, -1



Model integers using pictures of chips:

3. Define "absolute value":

4. Compare:	-234	136	-93	-12
-------------	------	-----	-----	-----

Learning to Solve

1. Sean had \$115 in the bank. He spent \$35 on jeans and \$63 on 3 shirts. He deposited \$45 in the bank. How much does he have in the bank now?

2. Margo was playing a trivia game. Each correct answer is worth 200 points, but if she answers incorrectly, she loses 300 points. She ended the game with –300 points. If she answered 6 questions, how many did she get correct? How many did she get incorrect?

Practicing Together

1. The average temperature in Alaska for the last week was –12°. The previous week, the temperature was twice as cold. What was the average temperature the previous week?

2. Ellen dove 12 feet under water. She swam up 7 feet and then dove back down 6 feet. What is her current depth?

Trying It on Your Own

1. Scuba Steve descended 32 feet below sea level. His friend, Rachel, dove 5 times more feet below sea level than Scuba Steve. What is Rachel's current depth?

a. -150 feet, or 150 feet below sea level

b. –160 feet, or 160 feet below sea level

c. -6.4 feet, or 6.4 feet below sea level

d. -128 feet, or 128 feet below sea level

2. Kayla and Tyler both collect baseball cards. Tyler has 12 times as many cards as Kayla. If Tyler has 264 cards, how many cards does Kayla have? Which expression can be used to solve this question?

a. 264 + 12 **b.** 264 - 12 **c.** 264(12) **d.** 264 ÷ 12

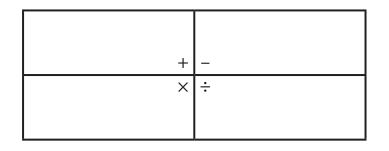
3. A submarine at the surface of the Pacific Ocean descends 8 feet every minute. Which equation represents the position of the submarine after 2 hours?

a. $-8 \times 1 \times 2 = -64$ **b.** $(-8 + 1) \times 120 = -840$ **c.** $-8 \times 1 \times 120 = -960$ **d.** $2 \times (-8) \times 120 = -1920$

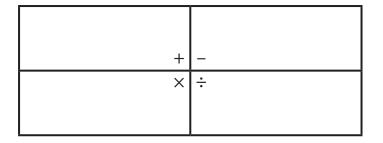
4. Antarctica is very cold in the winter. Its lowest recorded temperature was –128°. Finland is also very cold. Its lowest recorded temperature was –50°. What is the difference in these 2 temperatures?

Warming Up

Write 4 expressions that equal –36.



Write 4 expressions that equal 28.



Learning to Solve

1. Hunter read 15 books in October. He read 3 times as many books as Paul. How many books did Paul read?

2. The middle school football team scored 4 field goals worth 3 points each and 3 touchdowns with extra points worth 7 points each. What was the team's total points?

3. Misha was saving money for her summer vacation. Every week for 16 weeks, she put \$8 in her special fund. She took \$30 out of her fund to buy clothes for the vacation. How much money is in her fund?

4. James played a trivia game. For every correct answer, he scored 150 points. For every incorrect answer, he lost 200 points. He got 4 questions correct and 6 questions incorrect. What was his final score?

Trying It on Your Own

1. It costs \$300 per person to take a bus tour of Las Vegas. Brian has 4 friends and 2 family members coming to visit at different times and wants to take them all on the tour. Not counting himself, how much will he spend to take his family and friends on the tour?

- **a.** \$300
- **b.** \$1,800
- **c.** \$1,200
- **d.** \$600

2. Sam bought 3 hot dogs for \$2 each, 2 fries for \$1 each, and 3 drinks for \$2 each. He paid with a \$20 bill. How much change will he get back? Which expression models the problem?

a. 3(2) + 2(1) + 3(2) + 20 **b.** 3 + 2 + 2 + 1 + 3 + 2 + 20 **c.** 20 - 3(2) + 2(1) + 3(2)**d.** 20 - 3(2) - 2(1) - 3(2)

3. The temperature in Austin, Texas, at 2 p.m. was 91°. The temperature in Kansas City, Missouri, at 2 p.m. was 46°. From 3 p.m. to 8 p.m., the temperature dropped 5° every hour in both Austin and Kansas City. What is the difference in temperature between the 2 places at 8 p.m.?

- a. There was a 21° difference between Austin and Kansas City.
- **b.** There is not enough information to determine.
- c. There was a 45° difference between Austin and Kansas City.
- **d.** There was a 66° difference between Austin and Kansas City.

4. Sara simplified an expression and got an answer of –13. Which expression could she have simplified?

a. -5(3-2) + (-2)(-4) **b.** 5(3-2) - (2)(-4) **c.** -5(3-2) + (-2)(4)**d.** 5(3 + (-2)) - (-2)(-4)

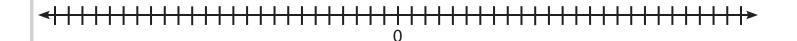
Appendices INTEGERS



Learning to Solve

On your number line, place the integers in their correct position.

1. Order from least to greatest: +1, -6, +13, -9



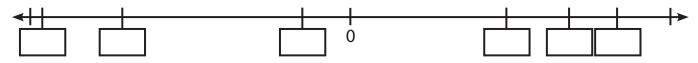
2. Order from least to greatest: 0, -14, 9, |-4|

3. Label 0, –4, and 4 on the number line. With your red and yellow pencils, draw a red line from 0 to –4 and a yellow line from 0 to +4.

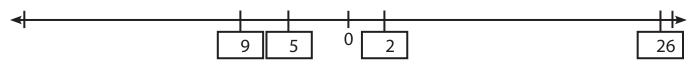
4. Label –3, |–4|, |–3|, 5, –1, and |2|.

Practicing Together

1. Place these integers in the appropriate spot on the number line: –26, 19, 16, –13, –4, 21.



2. Add the correct sign to each plotted number.



3. Jerry knows that there are 2 numbers that have an absolute value of 7. What 2 numbers was Jerry thinking about?

4. Write 2 integers between –5 and –11.

5. Order the integers from least to greatest. 2, |3|, -12, |-7|, -3, -1, |-5|

Trying It on Your Own

- 1. Why is the absolute value of an integer always non-negative?
 - **a.** The absolute value is always the opposite value—for example, |-8| is 8 and |9| is -9.
 - **b.** The absolute value is the distance from 0 which cannot be negative.
 - c. The absolute value is a rule that the teacher told us in math class.
 - **d.** When you remove the absolute value bars, all signs are also removed.

2. Letty was told to order the integers 75, |-12|, |7|, -100 from greatest to least. Which is the correct order?

a. -100, |7|, |-12|, 75 **b.** -100, |-12|, |7|, 75 **c.** 75, |7|, |-12|, -100 **d.** 75, |-12|, |7|, -100

3. Noah was explaining that –36 was greater than –14 because it was farther from 0. Is Noah's explanation correct?

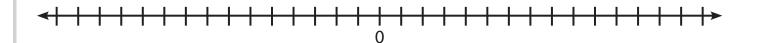
a. Noah is incorrect. –36 is less than –14 because it is farther to the left of 0. Negative numbers closer to 0 and positive numbers farther right of 0 are greater.

b. Noah is correct. –36 is greater than –14.

c. Noah is correct because the absolute value of –36 is greater than the absolute value of –14.

d. Noah is incorrect because he should not be using distance from 0 to compare the numbers; his explanation is wrong.

4. Which of the following shows the integers in order from least to greatest?



a. -12, |-9|, -3, |-1|, 0, |4|, 8 **b.** 8, |4|, 0, |-1|, -3, |-9|, -12 **c.** -12, -3, 0, |-9|, |-1|, 8 **d.** -12, -3, 0, |-1|, |4|, 8, |-9|

Warming Up

Sophia was on a game show that took away points for every wrong answer. She had a score of 800 but then answered 7 questions incorrectly. Each question was worth 300 points. What is her current score?

Practicing Together

Find the products and answer the questions.

1. 12(-22) = _____

- **2.** 5 × 26 =
- **3.** -13 -8 = _____
- **4.**_____= -6(31)

5. A professional video game player is rewarded 200 points for every level won. He loses 150 points every time he fails a level. After playing a total of 30 levels, he won 16 levels. How many total points does he have?

Meghan said that the video game player ended up with a negative number of points. Is Meghan correct?

How did you solve?

Trying It on Your Own

Find the product.

2. Using the commutative property, -4×-5 has the same product as which of the following?

a. -4×5 **b.** 4×-5 **c.** -5×4 **d.** -5×-4

3. Nola solved this word problem. On a winter night in Minnesota, the temperature was –4° at 9 p.m. At 6 a.m. the next day, the weatherman announced that it was 3 times colder. Nola wrote that the temperature was 12°. Is she correct? What should she do to solve?

a. No, she is incorrect. The temperature is –12° because it was 3 times colder. She should have multiplied –4 by 3, which equals –12.

b. Yes, she is correct because $3 \times -4 = -12$.

c. No, she is incorrect because the answer is –16°. First, she should have multiplied –4 by 3 and then added –4 because that was the original temperature.

d. Yes, she is correct because 3 times colder would make it positive.

4. Michael wrote the following example, 8(9) = -72 for the generalization that a positive integer times a positive integer equals a negative integer. Is his example correct? Why or why not?

a. Yes, his example matches the correct generalization.

b. No, his example is incorrect because his generalization is wrong. A positive integer times a positive integer equals a positive product.

c. No, his example is incorrect because 8(9) is equal to 64 not 72.

d. No, his example is incorrect because the product, 72 should be positive because you take the sign of the greater number and 9 is positive.

Warming Up

McKenzie had 704 tickets. She shared them with some friends. Each friend got 32 tickets. How many friends did she share her tickets with?

number of friends

McKenzie has 704 tickets. If she shares them with 22 friends, how many tickets does each friend get?

_____ tickets

Practicing Together

Find the quotients and answer the questions.

- **1.**____= -6 ÷ (-1)
- **2.** 30 ÷ (-3) = _____
- **3.** -9)54 =
- **4.** 24 ÷ −2 = _____

5. A football team lost a total of 27 yards on 3 plays in the second quarter. They lost the same amount of yards on each play. How many yards did they lose on each play?

Trying It on Your Own

Find the quotient.

```
1. _____ = -52 \div -4

a. -208

b. 208

c. -13

d. 13

2. -28 \div -7 = _____

a. 196

b. -4

c. 4

d. -196
```

3. Which of the following division equations could be part of the fact family for $-7 \times 5 = -35$?

a. $5 \div -35 = 7$ **b.** $-35 \div 5 = -7$ **c.** $-7 \div -35 = 5$ **d.** $-35 \div -5 = 7$

4. Amy said, "You can use the commutative property with division." Do you agree with Amy? Why or why not?

a. Yes, I agree because you can use the commutative property with multiplication.

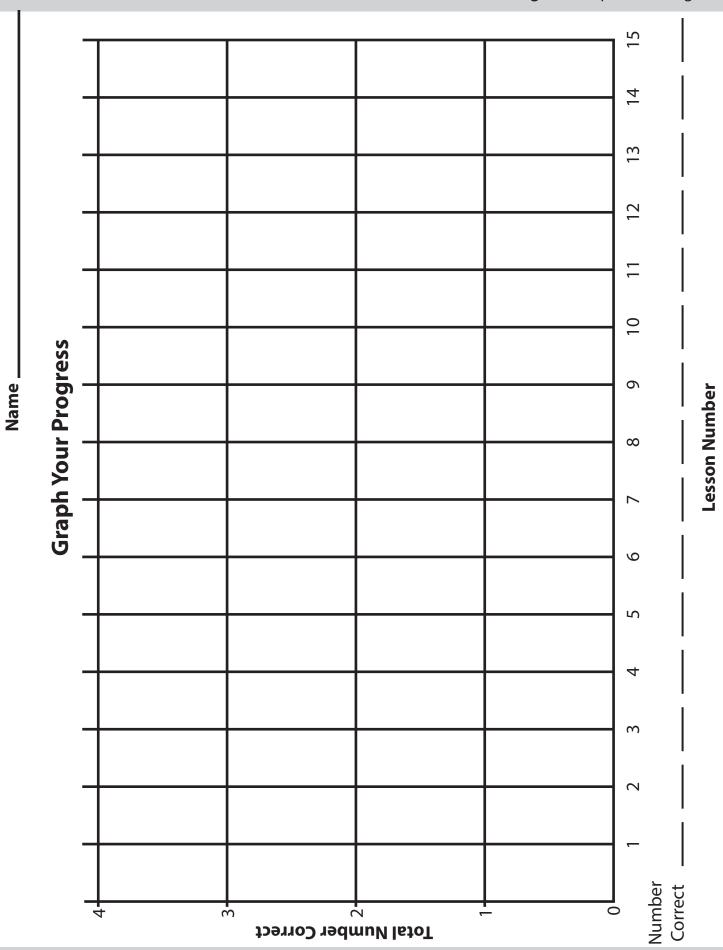
b. Yes, I agree because, for example, $12 \div 3 = 4$ is the same as $12 \div 4 = 3$.

c. No, I disagree because $12 \div 3 \neq 3 \div 12$.

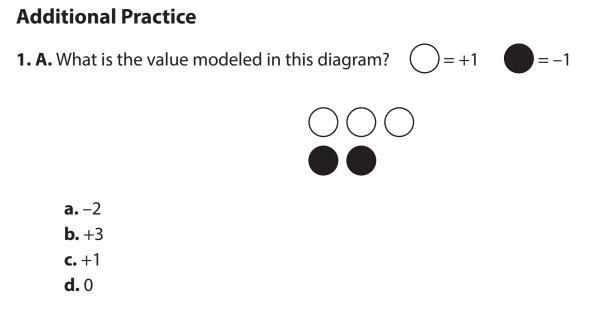
d. You cannot tell. It depends on the problem.

Notes INTEGERS

Example					
Picture					
Generalizations					

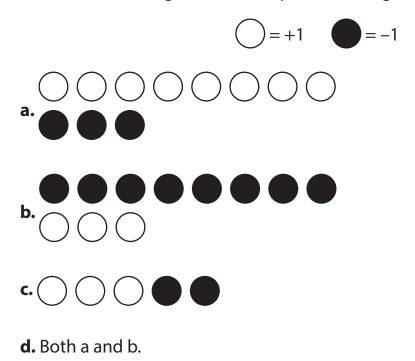


19 78	77 76	10.	B 14 1	×	+	_	×				+
68				÷ {}	-	+	+	_		×	
-60 -857					+		. ×		* *		+
⁸ 57					2	-	+ ×	-		×	+
47							+	-		×	
							×	:	÷.		+
37							+			×	
27									· ·		+
	20,0,0							-		×	+
17		115	14					-		×	
-									÷		+
			315					<u> </u>		×	
3			6.1						÷.		+
5								<u> </u>		×	+
13							\mathcal{B}_{1}	/ -		×	
									÷.		+
23	-24	-25	-26			-30				×	
33											
	-34	-35	Fvt	ra P		30	- +		- 6		
43	-44	-45									
·53			-20	.1	~~						
	-54	-55	-66	-67	18/	÷	+ ×	-		×	+
-63	6.1	65	-00-	11				`			·

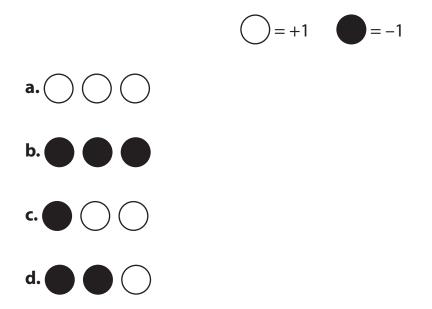


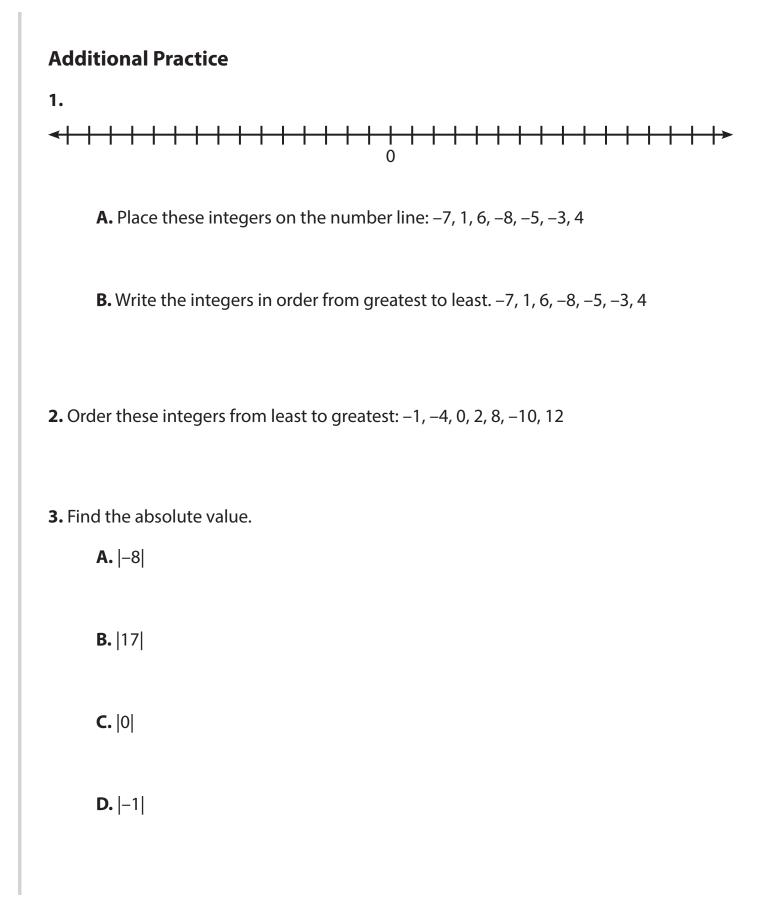
B. Draw another model for the value.

2. Jose modeled +5, using 2-colored chips. Which diagram shows +5 modeled correctly?



3. Which model shows the opposite of +3?





Additional Practice

Select the correct sum. You may use 2-colored chips or drawings to help you.

 $1. -3 + (-9) = _____$ a. -6b. -12c. 6d. 12 $<math display="block">2. -7 + 4 = _____$ a. -3b. 3c. -11d. 11

Additional Practice

Select the correct difference. You may use 2-colored chips or drawings to help you.

```
1. -6 - (-7) = _____

a. -13

b. 1

c. 13

d. -1

2. -10 - 3 = _____

a. 13

b. 7

c. -7

d. -13
```

3.
$$-14 - (-4) =$$

a. -18
b. -10
c. 18
d. 10
4. $9 - (-8) =$ _____
a. 17
b. 1
c. -17
d. -1

-

Additional Practice

1. Find the sums.

A. -8 + (-6) = _____

B. 3 + (-10) = _____

C. –12 + 17 = _____

2. Find the differences.

A. -11 - (-8) = _____

B. 9 – (–12) = _____

C. -8 - 10 = _____

3. The temperature at 9 am was 68°. By noon, the temperature fell 6°. By 4 pm, the temperature rose 8°. What was the temperature at 4 pm?

Additional Practice

1. Complete the Magic Square so that the sum of each of each row, column, and diagonal equals 15. Use numbers: 1, 2, 5, and 6.

8	3	4
		9
	7	

2. Jonathan found a missing value in a problem. He said the missing value was –9. For which equation is –9 the missing value?

a. +-4 = -13 **b.** -4 = 13 **c.** 14 + = -5**d.** 14 - = 5 **3.** A kite was at 60 feet above ground level. It ascended 300 feet above the ground level. What is its current position?

a. –300, or 300 feet above ground level.

b. 300, or –300 below ground level.

c. 360, or 360 feet above ground level.

d. –60, or 60 feet below ground level.

Place >, <, or = in the blank.

- **1.** -8 + 22 _____ -40 + 26
- **2.** -12 + (-35) _____ -32 + (-15)
- **3.** 75 + 18 _____ -75 + (-18)
- **4.** -15 + 36 _____ -36 + 60

1. Jim had \$150 in the bank. He spent \$27, \$33, \$14, and \$17 buying clothes for school. His mom put \$25 in the bank as a surprise. How much money does he have in the bank now?

2. Jess was hiking on a mountain. At 785 feet above sea level, she decided to descend 25 feet. She found a new trail and ascended 52 feet. She started back down the mountain and descended 45 feet. How many feet above sea level is she now?

3. In a trivia game, the rule is that every correct answer scores 75 points. For every incorrect answer, you lose 50 points.

A. Jay answered 4 questions in a row correctly. Then, he incorrectly answered 2 questions. The next 3 questions, he answered correctly. What was his ending score?

B. Sherry played the trivia game, too. She answered a total of 10 questions. Her final score was 250 points. How many questions did she get correct? How many questions did she answer incorrectly?

1. Which pairs of integers both have a product of -42?

a. (14, -3) and (-6, 7) **b.** (-14, -3) and (6, 7) **c.** (21, 2) and (-1, 42) **d.** (-2, -21) and (-6, 7)

2. James wrote a multiplication expression that has a product of –28. Which multiplication expression did he write?

- 3. Which pairs of integers both have a product of 36?
 - a. (6, 6) and (-6, 6)
 b. (4, 9) and (-12, -3)
 c. (6, -6) and (4, -9)
 d. (1, -36) and (-36, -1)

4. Susan wrote a multiplication expression that has a product of 48. Which multiplication expression did she write?

1. Monique divided a negative integer by a negative integer. Which of the following describes her quotient?

a. Her quotient will be negative because the signs stay the same.

b. Her quotient will be negative because it is related to the multiplication generalization that says a negative integer times a negative integer results in a positive integer as a product.

c. Her quotient will be positive because it is related to the multiplication generalization that says a positive integer times a negative integer results in a negative integer as a product.

d. You cannot tell because you do not know what integers are being divided.

2. The temperature fell the same amount of degrees each hour for 3 hours. The total number of degrees the temperature fell was 18°. How many degrees did the temperature fall each hour?

- **a.** 6°
- **b.** −6°
- **c.** 108°
- **d.** -108°

3. One multiplication equation in a fact family is $4 \times (-8) = -32$. Which of the following is a division equation in this same fact family?

a. $-8 \div (-32) = 4$ **b.** $4 \div (-32) = -8$ **c.** $-32 \div 4 = -8$ **d.** $-32 \div 8 = -4$

4. Which of the following would have a positive integer as its quotient?

a. −10 ÷ (−2) **b.** 0 ÷ 8 **c.** −16 ÷ 8 **d.** 8 ÷ (−2)

1. The height of water in a tank is 14 inches. Each week, the height increases by 2 inches. What is the height of the water after 3 weeks?

- **a.** 22 inches
- **b.** 20 inches
- **c.** 16 inches
- **d.** 11 inches

2. It was a hot day today. The temperature started at 80° in the morning and increased to 90° at noon. It stayed at 90° for 2 hours and then rose 5° by 6 p.m. What was the temperature at 6 p.m?

- **a.** 85°
- **b.** 95°
- **c.** 82°
- **d.** 86°

3. The audience of a football match with 200 people is increasing by 150 people per hour. How many people will be in the audience after 5 hours?

a. 350 people

b. 205 people

- **c.** 1,000 people
- **d.** 950 people

4. The price of a stock for a new candy started at \$2. The price increased \$4 each day for 2 weeks. What was the price of the stock after 4 weeks?

- **a.** \$10
- **b.** \$16
- **c.** \$30
- **d.** \$66

Use order of operations to simplify each expression.

1. $-3(4 + (-5)) \div 3 - 2 \times 5$

2. $8 \times 4 \div (-2) + 5(7 - 8)$

3. $-12 \div (-3) - (-1) \times (-4)$

4. 7 – 12 + (–3) – 2 × 6

Simplify each expression.

1. $(-5) + (3 \times 3) =$ _____ **a.** -9 **b.** 4 **c.** -45 **d.** 14 **2.** $4 \times (-4) + 4 =$ _____ **a.** -12 **b.** -4 **c.** 20 **d.** 0

3. -8 (-3) - (-4 +1) = _____ **a.** 33 **b.** 28 **c.** 27 **d.** 21

4. 5 + (−7) × (9) = _____ **a.** 7 **b.** −58 **c.** 72 **d.** −325

1. Jimmy had \$120 in the bank. He spent \$25 on a game and \$60 on a pair of shoes. He deposited \$20 in the bank. How much does he have in the bank now?

- **a.** \$10
- **b.** \$15
- **c.** \$20
- **d.** \$55

2. Peter dove 15 feet under water. He swam up 5 feet and then dove back down 6 feet. How many feet under water is he now?

- **a.** 15 feet
- **b.** 6 feet
- **c.** 16 feet
- **d.** 26 feet

3. A submarine at the surface of the Atlantic Ocean descends 6 feet every minute. Which equation represents the position of the submarine after 3 hours?

a. $-6 \times 1 \times 3 = -18$ **b.** $(-6 + 1) \times 180 = -900$ **c.** $-6 \times 1 \times 180 = -1080$ **d.** $3 \times (-6) \times 180 = -3240$

4. Antarctica is very cold in the winter. Its lowest recorded temperature was –118°. Finland is also very cold. Its lowest recorded temperature was –30°. What is the difference in these 2 temperatures?

- **a.** 88°
- **b.** 30°
- **c.** 148°
- **d.** 118°

1. Mario read 10 books in August. He read 2 times as many books as Paul. How many books did Paul read?

- a. 5 books
- **b.** 2 books
- **c.** 12 books
- **d.** 8 books

2. Maggie simplified an expression and got an answer of –15. Which expression could she have simplified?

a. 5(3 + (-2)) - (-2)(-1) **b.** 1(3 - 2) + (-2)(-7) **c.** -5(3 - 2) + (-4)(-5)**d.** -1(3 - 2) + (-2)(-7) **3.** he temperature in Austin, Texas, at 2 p.m. was 81°. The temperature in New York City, New York, at 2 p.m. was 36°. From 3 p.m. to 8 p.m., the temperature dropped 5° every hour in both Austin and New York City. What is the difference in temperature between the 2 places at 8 p.m.?T

- a. There was a 25° difference between Austin and New York.
- **b.** There was a 61° difference between Austin and New York.
- c. There was a 45° difference between Austin and New York.
- **d.** There is not enough information to determine.

4. Coreen had a savings account with a balance of \$110. She deposited \$50 for her birthday and \$30 of her babysitting money. She decided to buy a new cover for her iPad. She withdrew \$45. How much is in her savings account?

- **a.** \$75
- **b.** \$145
- **c.** \$105
- **d.** \$45

X4					-	×		<u>.</u>		+	
· /			XJ	×,	+ +		_		×		
	2	3		6	-	×		÷.		+	
					+		_		×		
<u> </u>	(11	× 8		X5		×		*		+	
							_		×		
		tipli		Ha		$\sqrt{\frac{1}{\times}}$		*	~	+	_
	VIUII			ΓΟ	n III	$\mathcal{V}_{\overline{\mathcal{V}}}$			×	+	_
		an part					-		×	·	-
						Ì		÷		+	-
	and	3)48		. Q			-		×		
		3/40		× 8				*		+	
							-		×		
								*		+	
		sior			5)60		-		×		
					5/00	×		+		+	_
			1	57			-		×		_
)15		8)96		/ /		×		•	×	+	_
	2)36			d Pra	act		C(9			
1-1	8)24)63 7/56	+	· +	×	-	<u>*</u>	×	+	
	Name										
-	T										
	Teacher										
	Period										

Name:	n Timed Practice Sh	neet 1	Number Correct:
1 8	2 1	3 5	4 6
× 2	<u>× 7</u>	× 8	× 3
5 7	6 6	7 2	8 4 × 5
× 4	× 6	× 12	
9 7 × 6	10 3 × 9	11 11 × 5	12 3 × 3
13 8	14 2	15 6	16 4 × 12
× 9	× 4	× 9	
17 9 × 6	18 10 × 8	19 2 × 9	20 8 × 3

Name:	n Timed Practice Sł	ant 2	
$1 \qquad 7 \\ \times 2$	2 5 <u>× 5</u>	3 9 <u>× 1</u>	Number Correct: 4 7 <u>× 11</u>
5 5	6 10	7 7	8 3
× 6	× 3	× 5	× 4
9 4 × 9	10 4	11 12	12 7
	× 7	× 6	× 8
13 7	14 8	15 6	16 5
× 10	× 6	× 7	× 3
17 9 × 8	18 6 × 4	19 9 × 4	20 8 × 4

Name:			
Multiplicatio	n Timed Practice Sl	neet 3	Number Correct:
1 1	2 4 × 3	3 5	4 10
× 12		× 2	<u>× 7</u>
5 10	6 4	7 3	8 12
× 2	× 8	× 7	× 7
9 11 × 6	10 3	11 4	12 5
	× 12	× 6	× 9
13 8	14 7	15 8	16 5
× 7	× 3	× 8	× 10
17 5	18 9	19 3	20 9
× 4	× 2	× 11	× 7

Name:			
Multiplicatior	n Timed Practice Sh	neet 4	Number Correct:
1 2 × 8	2 3 × 6	3 8 × 5	4 2 × 7
5 11 × 9	6 4 × 4	7 9 × 4	8 3 × 10
9 5 × 9	10 5 × 12	11 7 × 3	12 1 × 5
13 3 × 2	14 6 × 8	15 9 × 11	16 4 × 5
17 12 × 5	18 4 × 2	19 7 × 7	20 10 × 10

lame:	n Time e d Due etiles Cl		
$1 \qquad 4 \\ \times 6$	n Timed Practice Sl	3 5 <u>× 11</u>	Number Correct: 4 10 <u>× 5</u>
5 5	6 2	7 3	8 12
× 7	× 10	× 1	× 5
9 8	10 6	11 6	12 7
× 6	× 12	× 2	× 7
13 4	14 5	15 3	16 12 × 2
× 7	× 3	× 8	
17 9 × 3	18 11 × 4	19 7 × 4	20 9 × 10

Name:			
Multiplication	n Timed Practice Sł	neet 6	Number Correct:
1 4	2 3	3 7	4 6
× 3	× 6	× 5	× 4
5 8	6 2	7 11 × 2	8 5
× 10	× 2		× 5
9 3	10 4	11 7	12 8
× 5	× 8	× 9	<u>× 12</u>
13 2 × 10	14 1 × 8	15 6 <u>× 11</u>	16 11 × 12
17 12 × 8	18 10	19 2	20 9
	× 6	× 5	× 7

Name:			
Multiplication	Timed Practice Sh	neet 7	Number Correct:
1 5	2 4 × 4	3 5	4 9
× 8		× 7	× 2
5 8	6 3	7 2	8 3
× 11	× 7	× 6	× 5
9 3 × 4	10 9	11 6	12 8
	× 12	× 10	× 3
13 12	14 8	15 5	16 1
× 11	× 8	× 4	<u>× 11</u>
17 6 × 7	18 7 × 6	19 10 × 9	20 6 × 5

Name:			
Multiplication	Timed Practice Sh	neet 8	Number Correct:
1 3	2 9	3 11 × 2	4 6
× 10	× 6		× 10
5 7	6 8	7 5	8 4
× 9	× 7	× 2	× 11
9 4	10 6	11 6	12 8
× 1	× 9	× 5	× 5
13 10	14 11	15 2	16 9
× 3	× 7	× 12	× 9
17 6	18 2	19 7	20 4 × 2
× 8	× 3	× 12	

Name: Multiplication	n Timed Practice Sł	neet 9	Number Correct:
1 6	2 9	3 11 × 8	4 2
× 2	× 5		<u>× 6</u>
5 5	6 8	7 9	8 10 × 4
× 6	× 9	× 8	
9 12 × 3	10 11 × 11	11 4 × 10	12 7 × 8
13 3	14 4	15 8	16 12 × 9
× 9	× 9	× 2	
17 11 × 3	18 10 <u>× 7</u>	19 1 × 6	20 2 × 8

Name:			
	Timed Practice Sł	_	Number Correct:
1 3	2 6	3 3	4 10
× 8	× 3	× 3	<u>× 1</u>
5 2	6 2	7 9	8 9
× 5	<u>× 11</u>	×9	× 5
9 2	10 6	11 2	12 12 × 3
× 9	<u>× 6</u>	× 3	
13 2	14 12	15 8	16 11 × 8
<u>× 7</u>	× 10	<u>× 4</u>	
17 11 × 4	18 5 × 5	19 10 × 11	20 7 × 2

Division Timed	Practice Sheet 1		Number Correct:
1 7)21	2 5)10	3 2)14	4 9)27
5 6)24	6 10)70	7 8)32	8 6)36
9 3)9	10 5)35	11 1) 8	12 12)24
2)20	14 8)40	15 3)15	16 4)32
4)28	18 7)42	19 9)63	20 6)66

Name: Division Timed	Practice Sheet 2		Number Correct:
1 2)10	2 3)27	3 3)21	4 7)14
5 6) 30	6 1) 6	7 6) 54	8 12)60
9 3)36	10 4)24	11 5)25	12 10)80
13 8)16	14 11)14	15 8)24	16 5)30
17 9)54	18 6)60	19 8)72	20 7)56

me: Division Timed	Practice Sheet 3		Number Correct:
1 11)66	2 2)18	3 6)42	4 7)63
5 5)45	6 3)24	7 9)36	8 1)12
9 4)20	10 10)30	11 9)36	12 9)90
3 8)80	14 3)18	15 8)24	16 4)16
7)35	18 6)18	19 9)99	20 12)120

Divis		Practice Sheet 4		Number Correct:
1	5)15	2 11)55	3 4)12	4 9)45
5	7)28	6 4)36	7 1)7	8 10)60
9	2)16	10 5)40	11 8)56	12 2)24
13	9)18	14 11)88	15 12)48	16 7)49
17	7)56	18 3) 6	19 4)40	20 6) 30

lame: Division Timed	Practice Sheet 5		Number Correct:
1 3)21	2 6)12	3 3)36	4 3)15
5 9)36	6 8)48	7 3)12	8 10)90
9 4)24	10 5)60	11 11)33	12 8)64
13 1) 4	14 4) 28	15 6) 48	16 5) 55
17 12)24	18 7)70	19 9)27	20 12)96

ne: ivision Time	d Practice Sheet 6		Number Correct:
1 2)20	2 8)16	3 5)20	4 1) 3
5)35	6 4)44	7 6)48	8 11)110
3)18	10 2) 4	11 3)27	12 6)72
3 9)81	14 3)24	15 10)20	16 4)48
7 6)30	18 10)110	19 9) 54	20 7)28

4 11)55
8 2)22
12 12)72
16 6) 18
20 1)9

Name:			
Division Time	d Practice Sheet 8		Number Correct:
1 9)45	2 11)66	3 2)4	4 2)12
5 1) 5	6 12)108	7 5) 55	8 7)49
9 5)60	10 4) 8	11 4)32	12 10)40
13 7)84	14 7)21	15 12)144	16 6) 54
17 9)81	18 11)99	19 4)40	20 5)50

Number Correct:

1	11)22	2 4)12	3 6)66	4 5)30	
5	4)16	6 2 6	7 5)45	8 10)120	
9	10)40	10 8)88	11 8)72	12 12)36	
13	2)14	14 11)121	15 7)35	16 1)10	
17	4)48	18 9)72	19 12)84	20 3) 33	
			g Educational Risk—Mathematics Institute ©2016-2017 University of Texas System		23

Name: _____

Division Timed Practice Sheet 9

	ame: Division Timed Practice Sheet 10				
1 10)70	2 6)12	3 2)8	4 3)12		
5 5) 25	6 6)42	7 5)20	8 3)30		
9 2)18	10 10)100	11 4)12	12 8)48		
13 7)42	14 12)36	15 4) 48	16 11)77		
17 9)72	18 1)11	19 3)33	20 5)10		

Name:			
Mixed Facts Tir	ned Practice Sheet	:1	Number Correct:
1 4 × 7	2 2)16	3 4 × 5	4 7)21
5 11 × 1	6 7)56	7 8 × 8	8 3 × 4
9 4)36	10 3)18	11 8) 64	12 3 × 12
13 9)45	14 7)70	15 7 × 6	16 10 × 6
17 8 × 2	18 9 × 6	19 5) 20	20 5) 55

lame:			
Mixed Facts Tir	Number Correct:		
1 2 × 9	2 5 × 10	3 2)12	4 5 × 7
5 6)42	6 11 × 4	7 7 × 8	8 8)32
9 6) 54	10 3)33	11 5 × 12	12 1)12
13 12 × 2	14 4)16	15 6 × 9	16 3 × 6
17 12)24	18 3 × 8	19 10) 20	20 4) 8

 2 3)12 6 10)60 10 9 	3 4 <u>× 8</u> 7 4∫ 8	4 8) 56 8 6 $\times 1$
		<u>× 1</u>
10 9		
10 9 × 2	11 9)99	12 3 × 5
14 5 × 2	15 3)27	16 12 × 4
18 7 × 9	19 5)35	20 12)36
	<u>× 2</u>	<u>× 2</u>

The Meadows Center for Preventing Educational Risk—Mathematics Institute The University of Texas at Austin ©2016-2017 University of Texas System

Aixed Facts Tir	Number Correct:		
1 4 × 6	2 5)40	3 2 × 11	4 3)21
5 1)7	6 12 × 6	7 4)12	8 2 × 10
9 6 × 8	10 5) 50	11 3 × 3	12 9)72
13 8 × 10	14 7 × 4	15 11)99	16 5 × 9
17 12)60	18 6) 36	19 3 × 5	20 7)28

ame: Mixed Facts Timed Practice Sheet 5				
2 3 × 11	3 3)15	4 11)55		
6 7 × 5	7 9 × 1	8 9 × 7		
10 11 × 7	11 3)12	12 4)20		
14 9)36	15 12 × 10	16 8 × 9		
18 8)48	19 6)60	20 4)24		
	2 3 × 11 6 7 × 5 10 11 × 7 14 9)36	2 3 $\times 11$ 3 $3\overline{)15}$ 6 7 $\times 5$ 7 9 $\times 1$ 10 11 $\times 7$ 11 $3\overline{)12}$ 14 $9\overline{)36}$ 15 12 $\times 10$		

ime: Mixed Facts Ti	Number Correct: _		
1 3 × 9	2 5)30	3 4)28	4 10 × 8
5 8 × 7	6 7 × 3	7 2)20	8 5)25
9 6) 24	10 2 × 12	11 11 × 2	12 12)48
13 1)11	14 11)44	15 9 × 9	16 5 × 3
17 5)15	18 9 × 4	19 6) 48	20 3 × 10

Name: Mixed Facts Tir	Number Correct:	
1 5 × 4	2 4)32 3 8 × 3	
5 3)30	6 7)42 7 6)	30 8 6 × 7
9 6 × 4	10 4)40 11 7 $\times 1$	
13 9)81	14 10 15 9) × 12	63 16 4 × 9
17 6 × 2	18 11 19 11) × 3	22 20 10)70

lame:					
Mixed Facts Tin	Aixed Facts Timed Practice Sheet 8				
1 10 × 4	2 3)24	3 5)45	4 9 × 3		
5 6 × 11	6 6 × 5	7 10)40	8 1) 5		
9 8)24	10 3)36	11 11 × 9	12 6)18		
13 12)72	14 9 × 8	15 9)54	16 8 <u>× 6</u>		
17 7)14	18 6 × 7	19 7 × 12	20 5 × 5		

ame:			
Mixed Facts Tin	ned Practice Sheet	t 9	Number Correct:
1 4 × 4	2 9)18	3 9 × 5	4 3)12
5 9)27	6 11 × 11	7 5)60	8 6)12
9 6)60	10 5 × 6	11 12 × 8	12 8 × 1
13 7)49	14 6 × 2	15 11 × 10	16 7)77
17 7 × 10	18 11)121	19 8)16	20 4 × 12
17 7 × 10	18 11)121	19 8) 16	20 4 × 12

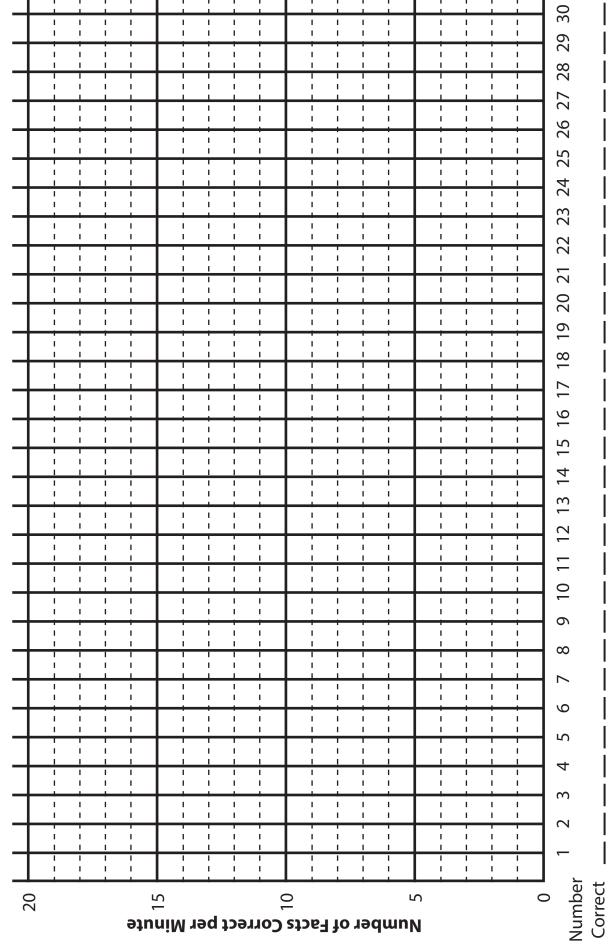
Name:			
Mixed Facts Timed Practice Sheet 10			Number Correct:
1 3 × 6	2 10 × 7	3 2)18	4 11)88
5 7 × 2	6 4)48	7 9 × 10	8 8)72
9 4 × 3	10 7)63	11 3 × 7	12 11 × 6
13 3 9	14 12)96	15 1)10	16 5)15
17 10)90	18 9 × 12	19 2 × 5	20 11 × 12



Fact Practice Graph

1 1

1 1 1 1



1 1 1

1 1

- --- --- --- --- --- --- --- ---Fact Practice Lesson Number

The Meadows Center for Preventing Educational Risk—Mathematics Institute The University of Texas at Austin ©2016-2017 University of Texas System