11 Chapter Test

Check It Out
Test Practice
BigIdeasMath.com

Find the absolute value.

1. $|-9|$
2. $|64|$
3. $|-22|$

Copy and complete the statement using <, >, or =.

4. $4 \square |-8|$
5. $|-7| \square -12$
6. $-7 \square |3|$

Evaluate the expression.

7. $-6 + (-11)$
8. $2 - (-9)$
9. $-9 \cdot 2$
10. $-72 \div (-3)$

Evaluate the expression when $x = 5$, $y = -3$, and $z = -2$.

11. $\frac{y + z}{x}$
12. $\frac{x - 5z}{y}$

Find the mean of the integers.

13. 11, −7, −14, 10, −5
14. −32, −41, −39, −27, −33, −44

15. **NASCAR** A driver receives −25 points for each rule violation. What integer represents the change in points after 4 rule violations?

16. **GOLF** The table shows your scores, relative to *par*, for nine holes of golf. What is your total score for the nine holes?

Hole	1	2	3	4	5	6	7	8	9	Total
Score	+1	−2	−1	0	−1	+3	−1	−3	+1	?

17. **VISITORS** In a recent 10-year period, the change in the number of visitors to U.S. national parks was about −11,150,000 visitors.

   a. What was the mean yearly change in the number of visitors?

   b. During the seventh year, the change in the number of visitors was about 10,800,000. Explain how the change for the 10-year period can be negative.

12 Chapter Test

Check It Out
Test Practice
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Write the rational number as a decimal.

1. $\frac{7}{40}$ **2.** $-\frac{1}{9}$ **3.** $-\frac{21}{16}$ **4.** $\frac{36}{5}$

Write the decimal as a fraction or a mixed number in simplest form.

5. -0.122 **6.** 0.33 **7.** -4.45 **8.** -7.09

Add or subtract. Write fractions in simplest form.

9. $-\frac{4}{9} + \left(-\frac{23}{18}\right)$ **10.** $\frac{17}{12} - \left(-\frac{1}{8}\right)$ **11.** $9.2 + (-2.8)$ **12.** $2.86 - 12.1$

Multiply or divide. Write fractions in simplest form.

13. $3\frac{9}{10} \times \left(-\frac{8}{3}\right)$ **14.** $-1\frac{5}{6} \div 4\frac{1}{6}$

15. $-4.4 \times (-6.02)$ **16.** $-5 \div 1.5$

17. $-\frac{3}{5} \cdot \left(2\frac{2}{7}\right) \cdot \left(-3\frac{3}{4}\right)$ **18.** $-6 \cdot (-0.05) \cdot (-0.4)$

19. ALMONDS How many 2.25-pound containers can you make with 24.75 pounds of almonds?

20. FISH The elevation of a fish is -27 feet.

a. The fish decreases its elevation by 32 feet, and then increases its elevation by 14 feet. What is its new elevation?

b. Your elevation is $\frac{2}{5}$ of the fish's new elevation. What is your elevation?

21. RAINFALL The table shows the rainfall (in inches) for three months compared to the yearly average. Is the total rainfall for the three-month period greater than or less than the yearly average? Explain.

November	December	January
-0.86	2.56	-1.24

22. BANK ACCOUNTS Bank Account A has \$750.92, and Bank Account B has \$675.44. Account A changes by –\$216.38, and Account B changes by $-$\$168.49. Which account has the greater balance? Explain.

13 Chapter Test

Check It Out
Test Practice
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Simplify the expression.

1. $8x - 5 + 2x$
2. $2.5w - 3y + 4w$
3. $3(5 - 2n) + 9n$
4. $\frac{5}{7}x + 15 - \frac{9}{14}x - 9$

Find the sum or difference.

5. $(3j + 11) + (8j - 7)$
6. $\frac{3}{4}(8p + 12) + \frac{3}{8}(16p - 8)$
7. $(2r - 13) - (-6r + 4)$
8. $-2.5(2s - 5) - 3(4.5s - 5.2)$

Factor out the coefficient of the variable.

9. $3n - 24$
10. $\frac{1}{2}q + \frac{5}{2}$

Solve the equation. Check your solution.

11. $7x = -3$
12. $2(x + 1) = -2$
13. $\frac{2}{9}g = -8$
14. $z + 14.5 = 5.4$
15. $-14 = 6c$
16. $\frac{2}{7}k - \frac{3}{8} = -\frac{19}{8}$

17. **HAIR SALON** Write an expression in simplest form that represents the income from w women and m men getting a haircut and a shampoo.

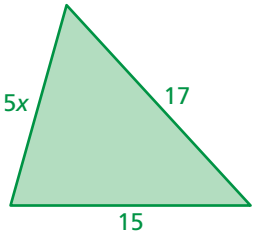
	Women	Men
Haircut	$45	$15
Shampoo	$12	$7

18. **RECORD** A runner is compared with the world record holder during a race. A negative number means the runner is ahead of the time of the world record holder. A positive number means that the runner is behind the time of the world record holder. The table shows the time difference between the runner and the world record holder for each lap. What time difference does the runner need for the fourth lap to match the world record?

Lap	Time Difference
1	−1.23
2	0.45
3	0.18
4	?

19. **GYMNASTICS** You lose 0.3 point for stepping out of bounds during a floor routine. Your final score is 9.124. Write and solve an equation to find your score before the penalty.

20. **PERIMETER** The perimeter of the triangle is 45. Find the value of x.



14 Chapter Test

Check It Out
Test Practice
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Find the unit rate.

1. 84 miles in 12 days

2. $2\frac{2}{5}$ kilometers in $3\frac{3}{4}$ minutes

Tell whether the ratios form a proportion.

3. $\frac{1}{9}, \frac{6}{54}$

4. $\frac{9}{12}, \frac{8}{72}$

Use a graph to tell whether x and y are in a proportional relationship.

5.

x	2	4	6	8
y	10	20	30	40

6.

x	1	3	5	7
y	3	7	11	15

Use the table to write a proportion.

7.

	Monday	Tuesday
Gallons	6	8
Miles	180	m

8.

	Thursday	Friday
Classes	6	c
Hours	8	4

Solve the proportion.

9. $\frac{x}{8} = \frac{9}{4}$

10. $\frac{17}{3} = \frac{y}{6}$

Graph the line that passes through the two points. Then find the slope of the line.

11. $(15, 9), (-5, -3)$

12. $(2, 9), (4, 18)$

Tell whether x and y show direct variation. Explain your reasoning.

13. $xy - 11 = 5$

14. $x = \frac{3}{y}$

15. $\frac{y}{x} = 8$

16. **MOVIE TICKETS** Five movie tickets cost $36.25. What is the cost of 8 movie tickets?

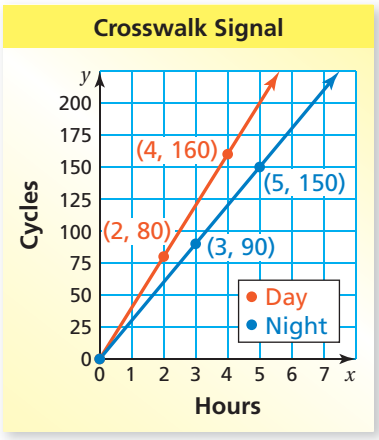
17. **CROSSWALK** The graph shows the number of cycles of a crosswalk signal during the day and during the night.

a. Compare the steepness of the lines. What does this mean in the context of the problem?

b. Find and interpret the slope of each line.

Don't Walk

Walk



18. **GLAZE** A specific shade of green glaze requires 5 parts blue to 3 parts yellow. A glaze mixture contains 25 quarts of blue and 9 quarts of yellow. How can you fix the mixture to make the specific shade of green glaze?

15 Chapter Test

Check It Out
Test Practice
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Write the percent as a decimal.

1. 0.96%

2. 65%

3. 25.7%

Write the decimal as a percent.

4. 0.42

5. 7.88

6. 0.5854

Tell which number is greater.

7. $\frac{16}{25}$, 65%

8. 56%, 5.6

Use a number line to order the numbers from least to greatest.

9. 85%, $\frac{15}{18}$, 0.84

10. 58.3%, 0.58, $\frac{7}{12}$

Answer the question.

11. What percent of 28 is 21?

12. 64 is what percent of 40?

13. What number is 80% of 45?

14. 0.8% of what number is 6?

Identify the percent of change as an *increase* or a *decrease*. Then find the percent of change. Round to the nearest tenth of a percent if necessary.

15. 4 strikeouts to 10 strikeouts

16. \$24 to \$18

Find the sale price or selling price.

17. Original price: \$15
Discount: 5%
Sale price: ?

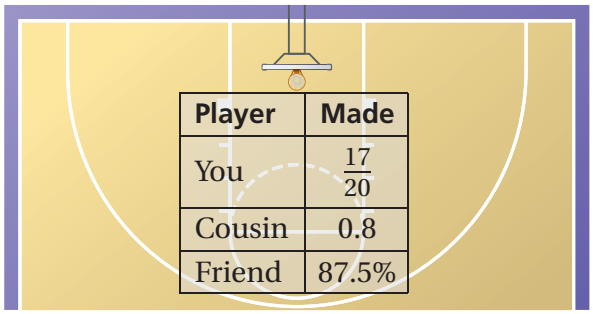
18. Cost to store: \$5.50
Markup: 75%
Selling price: ?

An account earns simple interest. Find the interest earned or the principal.

19. Interest earned: ?
Principal: \$450
Interest rate: 6%
Time: 8 years

20. Interest earned: \$27
Principal: ?
Interest rate: 1.5%
Time: 2 years

21. **BASKETBALL** You, your cousin, and a friend each take the same number of free throws at a basketball hoop. Who made the most free throws?



Player	Made
You	$\frac{17}{20}$
Cousin	0.8
Friend	87.5%

22. **PARKING LOT** You estimate that there are 66 cars in a parking lot. The actual number of cars is 75.

a. Find the percent error.

b. What other estimate gives the same percent error? Explain your reasoning.

23. **INVESTMENT** You put \$800 in an account that earns 4% simple interest. Find the total amount in your account after each year for 3 years.