

**Incoming 7th Grader Summer Packet****Find the quotient.**

1.  $5.7 \overline{) 21.09}$

2.  $\frac{5}{6} \div \frac{6}{7}$

3.  $1\frac{3}{5} \div 5$

- \_\_\_\_\_ 4. Nicole's friend runs  $\frac{4}{5}$  of a mile, but her distance is only  $\frac{4}{9}$  of Nicole's distance. How far does Nicole run?
- a.  $\frac{45}{16}$  mi      b.  $\frac{5}{9}$  mi      c.  $\frac{16}{45}$  mi      d.  $\frac{9}{5}$  mi

**Find the product.**

5.  $7.28 \times 2.6$

6. Jack and Helen are making cookies. The recipe says to combine  $\frac{1}{2}$  cup of butter with  $\frac{3}{4}$  cup chocolate chips and  $\frac{3}{8}$  cup chopped nuts.
- a. When these three ingredients are mixed together, how many cups of the mixture will Jake and Helen have? Show your work.
- b. Jack and Helen decide to triple the recipe.
- How many cups of butter will be needed?
  - How many cups of chocolate chips will be needed?
  - How many cups of chopped nuts will be needed?
- c. When the ingredients for the tripled recipe are combined, how many cups of the mixture will Jack and Helen have?

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Compare. Use  $<$ ,  $=$ , or  $>$ .

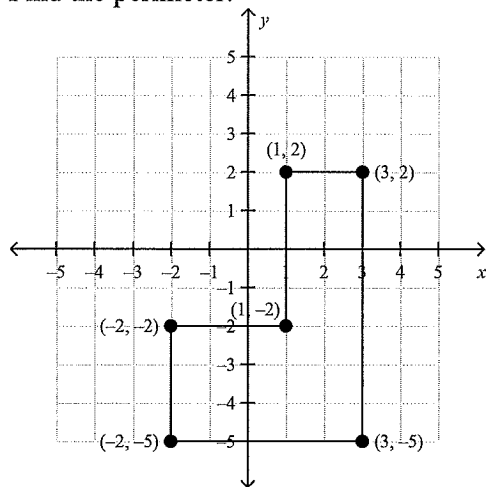
\_\_\_\_\_ 7.  $|-14|$    $|10|$

a. =

b.  $<$

c.  $>$

\_\_\_\_\_ 8. Find the perimeter.



a. 12

c. 24

b. 19

d. 30

9. Plot the following points on the grid and label each point.

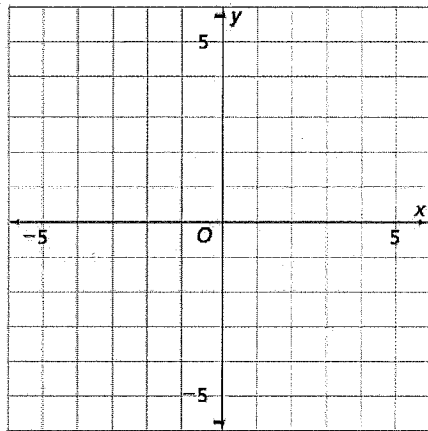
a.  $(1, -5)$

b.  $(2, 0)$

c.  $(-3, 5)$

d.  $(0, -2)$

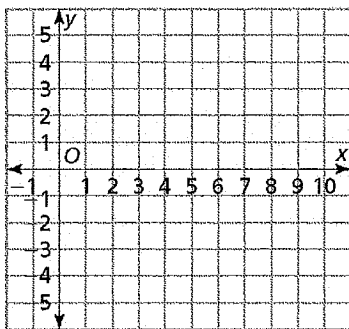
e.  $(-2, -2)$



10. In the school's Future Investors Club stock market game, the following gains/losses in stock price were earned over 10 days.

Day	1	2	3	4	5	6	7	8	9	10
Gain/Loss	-\$5.50	\$0	-\$3.50	\$3	\$4	-\$0.50	\$1	-\$2	-\$2.4	-\$3

Companies often plot stock price gains/losses to display the changes over time. Plot a graph of the (day, gain/loss) data for the Future Investors Club.



11. Order these numbers from least to greatest:

$$0 \qquad \frac{8}{3} \qquad -\frac{2}{5} \qquad 1\frac{3}{4} \qquad \frac{19}{10} \qquad -\frac{3}{4}$$

12. Arrange these decimals from least to greatest:

$$-6.00 \qquad -0.56 \qquad -0.060 \qquad -0.6 \qquad -0.056$$

**Order from least to greatest.**

\_\_\_\_\_ 13.  $-0.33, 0.25, -\frac{1}{2}, -0.17$

a.  $0.25, -0.17, -0.33, -\frac{1}{2}$

c.  $-0.33, 0.25, -\frac{1}{2}, -0.17$

b.  $-\frac{1}{2}, -0.17, -0.33, 0.25$

d.  $-\frac{1}{2}, -0.33, -0.17, 0.25$

**Evaluate the expression for the given value of  $x$ .**

14.  $4.5 + x^2$  when  $x = 1.5$

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15. Find the GCF of 32 and 56.

\_\_\_\_\_ 16. Find the prime factorization of 160

a.  $1 \times 2 \times 2 \times 2 \times 2 \times 2 \times 5$

c.  $2^4 \times 5$

b.  $2 \times 2 \times 2 \times 10$

d.  $2 \times 2 \times 2 \times 2 \times 2 \times 5$

17. Use the Distributive Property to write an equivalent expression.

a.  $2 \cdot 2(3x + 2)$

b.  $4x + 8y$

18. a. Which of the following expressions are equivalent? Circle your answers. Do not use a table or graph.

$8x - 12x + 4$

$12x - 4(4x - 1)$

$4 - 4x$

$4(1 - 4x)$

b. Explain your reasoning.

c. If an expression is not equivalent to the others, write an expression that is equivalent to it.

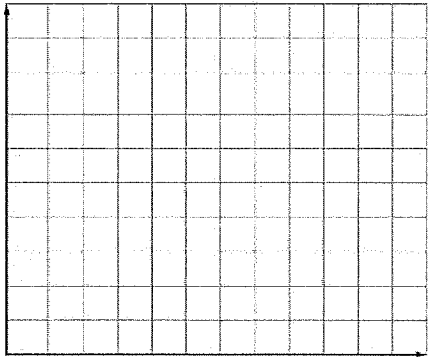
**Find the value of the expression.**

19.  $[2 \cdot (10 + 5)] - 5$

20.  $4 \times 3 + 30 \div 5$

21. The tour operators thought it would be a good idea to get a souvenir T-shirt for each customer who went on the Ocean Bike Tour. They found a company who would sell them shirts with their logo for \$6.25 each.

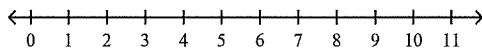
a. Make a table and a graph that show number of shirts and cost.

Table	Graph
	

b. Write an equation that shows how to determine the T-shirt cost for any number of customers.

c. How many shirts did the company buy if their total cost is \$100? Explain how you found your answer.

22. Find the values of  $x$  that satisfy the inequality  $x < 7$ . Then graph the solutions for  $x$  on the number line.



**Solve the equation.**

23.  $5.8 = \frac{z}{2.2}$

24.  $5.4 = 0.9x$

25.  $x - 8.7 = 18.6$

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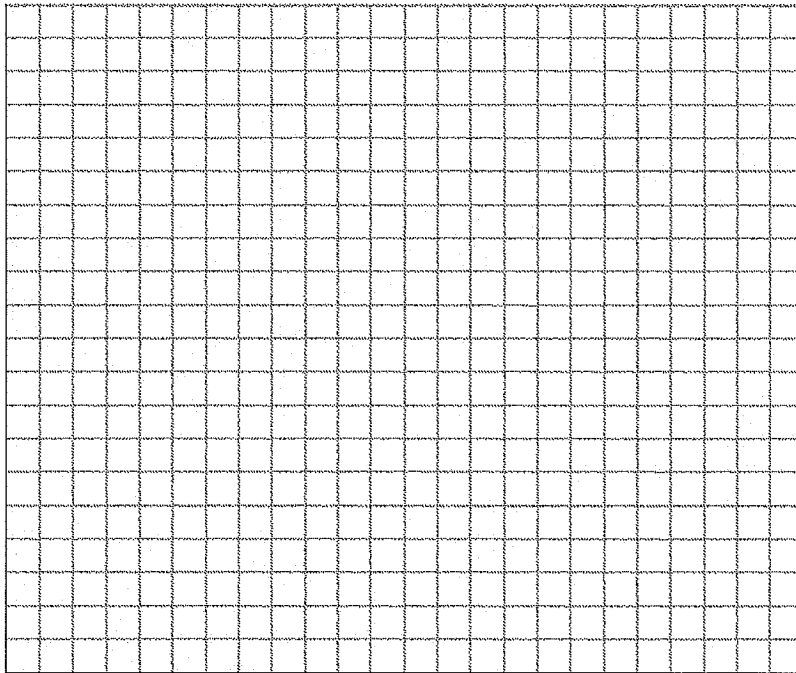
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- \_\_\_\_\_ 26. Which is the best buy?
- a. \$24.24 for 12 bottles of juice
  - b. \$18.09 for 9 bottles of juice
  - c. \$16.32 for 8 bottles of juice
  - d. \$22.33 for 11 bottles of juice

- \_\_\_\_\_ 27. Write three ratios equal to  $\frac{4}{28}$ .
- a.  $\frac{1}{8}, \frac{2}{16}, \frac{3}{24}$
  - b.  $\frac{1}{7}, \frac{2}{14}, \frac{3}{21}$
  - c.  $\frac{4}{28}, \frac{4}{32}, \frac{4}{36}$
  - d.  $\frac{2}{12}, \frac{3}{18}, \frac{4}{24}$

- \_\_\_\_\_ 28. Which three ratios equal  $\frac{4}{12}$ ?
- a.  $\frac{1}{3}, \frac{2}{6}, \frac{3}{9}$
  - b.  $\frac{3}{1}, \frac{2}{6}, \frac{9}{3}$
  - c.  $\frac{3}{1}, \frac{6}{2}, \frac{9}{3}$
  - d.  $\frac{1}{3}, \frac{6}{2}, \frac{3}{9}$

29. Teresa baby-sits for \$4.50 an hour.
- a. Make a table showing how much money she will make over time.
  - b. Graph your data, label the axes and name the graph.



- c. Does it make sense to connect the points on the graph? Why or why not?
- d. About how many hours does Teresa have to baby-sit to earn \$20? Explain your answer.
- e. If Teresa baby-sits 5.5 hours, how much will she earn? Explain your answer.

- \_\_\_\_ 30. Estimate a 15% tip for a \$26.80 meal.
- a. \$1.35
  - b. \$2.70
  - c. \$4.05
  - d. \$31.05

31. You buy a refrigerator for \$711. The sales tax rate is 4%. Estimate the sales tax.

**Write an equivalent expression.**

- \_\_\_\_ 32.  $2 + 4(c + 7)$
- a.  $6c - 5$
  - b.  $30 + 4c$
  - c.  $6c + 9$
  - d.  $15 + 4c$

33. Tell whether the expressions are equivalent and explain your reasoning.

$4(x + 7)$  and  $4x + 7$

34. The ages in years of the houses on Kelly's block are 20, 26, 11, 2, 28, 18, 2, and 27.
- Find the mean age of the houses.
  - Find the median age.
  - Find the mode.
  - Which measure(s) would you use to represent the ages of the houses? Explain.

35. Joe asked his classmates, *How did you get to school this morning?*  
He collected the following responses:

family car	bus	car pool	biked
biked	walked	family car	biked
bus	biked	walked	bus
biked	family car	car pool	family car
bus	bus	walked	walked
walked	walked	walked	car pool

Make a frequency table for the set of data.

a.

Transportation	Tally	Frequency
walked		7
biked		5
bus		5
family car		4
car pool		3

c.

Transportation	Tally	Frequency
walked		7
biked		6
bus		5
family car		3
car pool		3

b.

Transportation	Tally	Frequency
walked		7
biked		4
bus		5
family car		5
car pool		3

d.

Transportation	Tally	Frequency
walked		7
biked		4
bus		6
family car		4
car pool		3

36. Find the median of the data set.

3, 35, 23, 37, 45, 5, 49, 27, 48

- a. 35                      b. 34                      c. 30.2                      d. 38