

Name _____

Date _____

Pre-Course

Pre-Course Test

Tell whether the two fractions form a proportion.

1. $\frac{3}{4}, \frac{16}{20}$

2. $\frac{5}{7}, \frac{30}{42}$

3. $\frac{4}{18}, \frac{6}{27}$

4. Use the ratio table to find the unit rate in dollars per ounce.

Amount (ounces)	12	16	20	24
Cost (dollars)	0.96	1.28	1.6	1.92

Order the numbers from least to greatest.

5. $|-5|, 6, -6, -|4|, -2$

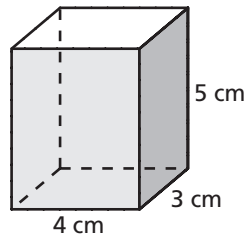
6. $\frac{15}{2}, -8.5, -\frac{42}{5}, 10.2$

Solve the inequality.

7. $4x < 24$

8. $x + 8 \geq 12$

9. What is the volume of the prism?



10. A map has a scale of 1 in. : 10 mi. On the map, the distance between two cities is 5 inches. What is the actual distance between the cities?

Simplify the expression.

11. $-4 + 11$

12. $-6 - 9$

13. $-7(-8)$

14. $60 \div (-4)$

15. $|-34|$

16. $| -(-41) |$

17. $17(-14)$

18. $12 - (-19)$

19. $\frac{4}{15} + \frac{5}{9}$

20. $-\frac{7}{8} \div \frac{3}{4}$

21. $\frac{13}{18} \cdot \frac{9}{25}$

22. $-\frac{7}{12} - \frac{1}{8}$

23. $(0.6)^2$

24. $8.37(-5.3)$

25. $0.95 - 3.49$

Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____
21. _____
22. _____
23. _____
24. _____
25. _____

Pre-Course

Pre-Course Test (continued)

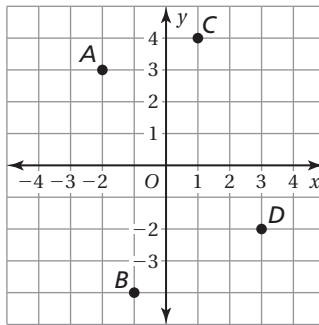
26. The length and the width of a rectangle are both doubled. What is the ratio of the area of the larger rectangle to the area of the smaller rectangle?

Solve the equation.

27. $7 + x = -2$ 28. $8 - x = 13$ 29. $x - 11 = -5$
 30. $3x - 2 = -5$ 31. $8x + 5 = 21$ 32. $9 - 2x = 23$
 33. Use the properties of equality to show that the equation $6x + 3 = 27$ is equivalent to the equation $2x = 8$.

Find the coordinates of the point.

34. *A* 35. *B*
 36. *C* 37. *D*



Complete the statement using <, >, or =.

38. 1 in. ___ 2.54 cm 39. 40 in. ___ 1 m 40. 7 L ___ 2 gal

Write the fraction as a decimal.

41. $\frac{3}{4}$ 42. $\frac{5}{16}$ 43. $\frac{21}{4}$

44. In a class, the teacher asks each person wearing red to name his or her favorite color. Is this sample representative of the entire class? Explain.
 45. The data below are the test scores of the students in a math class.

97, 76, 84, 82, 90, 95, 77, 79, 80, 82, 84, 77, 100, 78, 87

Create a stem-and-leaf plot to represent the data.

46. Each of the letters in the word MATHEMATICS are written on separate index cards. The cards are then placed in a hat. What is the probability of randomly drawing an index card with a vowel on it from the hat?

Answers

26. _____
 27. _____
 28. _____
 29. _____
 30. _____
 31. _____
 32. _____
 33. _____
 34. _____
 35. _____
 36. _____
 37. _____
 38. **See left.**
 39. **See left.**
 40. **See left.**
 41. _____
 42. _____
 43. _____
 44. _____
 45. **See left.**
 46. _____

Item Number	Skills
1	simplifying fractions, understanding proportion
2	simplifying fractions, understanding proportion
3	simplifying fractions, understanding proportion
4	using a ratio table to find a unit rate
5	ordering rational numbers
6	ordering rational numbers
7	solving one-step inequalities
8	solving one-step inequalities
9	finding the volume of a prism
10	understanding scale
11	adding integers
12	subtracting integers
13	multiplying integers
14	dividing integers
15	finding absolute value of integers
16	finding absolute value of integers
17	multiplying integers
18	subtracting integers
19	adding fractions
20	dividing fractions
21	multiplying fractions
22	subtracting fractions
23	raising a decimal to a power

Item Number	Skills
24	multiplying decimals
25	subtracting decimals
26	understanding how changes in linear dimensions affect the area of a figure
27	solving one-step equations
28	solving one-step equations
29	solving one-step equations
30	solving two-step equations
31	solving two-step equations
32	solving two-step equations
33	using properties of equality
34	identifying the coordinates of a point
35	identifying the coordinates of a point
36	identifying the coordinates of a point
37	identifying the coordinates of a point
38	converting between metric and customary
39	converting between metric and customary
40	converting between metric and customary
41	writing a fraction as a decimal
42	writing a fraction as a decimal
43	writing a fraction as a decimal
44	evaluating a sample
45	making a stem-and-leaf plot
46	theoretical probability

