

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. You buy a sweater that is discounted 25%. The original price of the sweater is \$40. What is the price of the sweater after the discount?

5. Find the actual distance between Lisbon and Barcelona.



Find the coordinates of the point.

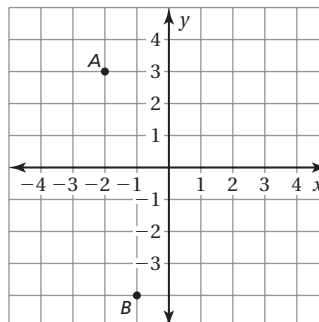
6. *A*

7. *B*

Plot the ordered pair.

8. (1, 4)

9. (3, -2)



Simplify the expression.

10.  $-4 + 11$

11.  $-7(-8)$

12.  $60 \div (-4)$

13.  $|-34|$

14.  $| -(-41) |$

15.  $12 - (-19)$

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

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

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

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

20.  $8.37(-5.3)$

21.  $0.95 - 3.49$

**Answers**

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. **See left.**

9. **See left.**

10. \_\_\_\_\_

11. \_\_\_\_\_

12. \_\_\_\_\_

13. \_\_\_\_\_

14. \_\_\_\_\_

15. \_\_\_\_\_

16. \_\_\_\_\_

17. \_\_\_\_\_

18. \_\_\_\_\_

19. \_\_\_\_\_

20. \_\_\_\_\_

21. \_\_\_\_\_

**Pre-Course**

**Pre-Course Test (continued)**

Solve the equation, if possible.

22.  $x - 9 = -2$

23.  $-4x = 32$

24.  $9 - 2x = 23$

25.  $x - 7 = x + 6$

26.  $4x - 2 = x - 5$

27.  $4x + 12 = 4(3 + x)$

28. Use the properties of equality to show that the equation  $6x + 3 = 27$  is equivalent to the equation  $2x = 8$ .

**Answers**

22. \_\_\_\_\_

23. \_\_\_\_\_

24. \_\_\_\_\_

25. \_\_\_\_\_

26. \_\_\_\_\_

27. \_\_\_\_\_

28. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

29. \_\_\_\_\_

30. \_\_\_\_\_

31. \_\_\_\_\_

32. \_\_\_\_\_

33. \_\_\_\_\_

34. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

35. **See left.**

36. \_\_\_\_\_

\_\_\_\_\_

37. \_\_\_\_\_

38. \_\_\_\_\_

39. \_\_\_\_\_

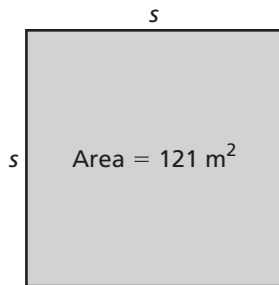
40. \_\_\_\_\_

41. \_\_\_\_\_

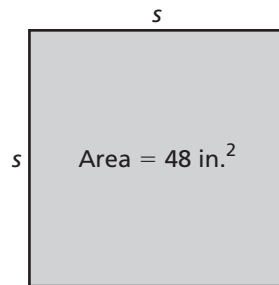
42. \_\_\_\_\_

Find the side length of the square.

29.



30.



Write the fraction as a decimal.

31.  $\frac{3}{4}$

32.  $\frac{5}{16}$

33.  $\frac{21}{4}$

34. 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.

35. 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.

36. Find the slope and y-intercept of the graph of  $y = 3x - 8$ .

Simplify the expression.

37.  $\sqrt{25}$

38.  $\sqrt[3]{-8}$

39.  $\sqrt{54}$

40.  $(-6)^2$

41.  $(3d)^4$

42.  $\frac{2^3}{2^5}$

Item Number	Skills
1	simplifying fractions, understanding proportion
2	simplifying fractions, understanding proportion
3	simplifying fractions, understanding proportion
4	solving a problem involving a discount
5	understanding scale
6	identifying the coordinates of a point
7	identifying the coordinates of a point
8	plotting a point in a coordinate plane
9	plotting a point in a coordinate plane
10	adding integers
11	multiplying integers
12	dividing integers
13	finding absolute value of integers
14	finding absolute value of integers
15	subtracting integers
16	adding fractions
17	dividing fractions
18	multiplying fractions
19	subtracting fractions
20	multiplying decimals
21	subtracting decimals

Item Number	Skills
22	solving one-step equations
23	solving one-step equations
24	solving two-step equations
25	recognizing equations with no solution
26	solving equations with variables on both sides
27	solving equations with infinitely many solutions
28	using properties of equality
29	finding a square root
30	simplifying a square root
31	writing a fraction as a decimal
32	writing a fraction as a decimal
33	writing a fraction as a decimal
34	evaluating a sample
35	making a stem-and-leaf plot
36	finding the slope and $y$ -intercept of a linear function
37	finding a square root
38	finding a cube root
39	simplifying a square root
40	raising a number to an exponent
41	using properties of exponents
42	using properties of exponents

