

Write the percent as a decimal.

- 1) 400%
- 2) 51.49%
- 3) 3%

Write the decimal as a percent.

- 4) 2.1
- 5) 0.001
- 6) 0.15

Write the percent as an equivalent decimal and fraction in simplest form.

- 7) 45%

Write the fraction as a decimal and percent.

- 8)  $\frac{21}{4}$

Solve.

- 9) Write the equivalent decimal and percent for  $\frac{21}{5}$ .

Translate to an equation and solve.

- 10) 18 is 2% of what number?
- 11) 175% of 8 is what number?
- 12) 105 is what percent of 70?

Solve.

- 13) What is the sales tax on a scanner priced at \$160 if the sales tax rate is 7.6%?
- 14) A sofa sells for \$1038. If the sales tax rate is 6.3%, what is the total price?

Complete each ordered-pair solution of the given equation. Show all work.

15)  $y = 4x$ ; (4, ), (0, ), ( , -16)

Determine whether the ordered pair is a solution of the given linear equation. Show all work.

16) (2, -8);  $y = -3x + 2$

17) (-1, 3);  $3x - 5y = -18$

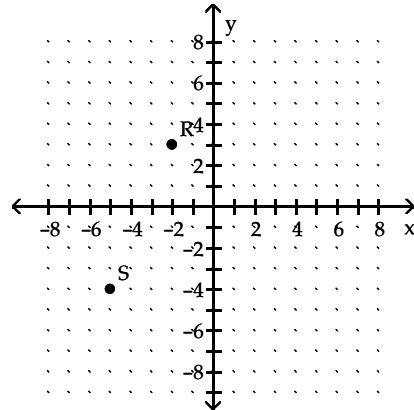
Plot the point corresponding to the ordered pair.

18) (5, 2)

19) (-6, 0)

Find the x- and y-coordinates of each labeled point.

20)



Complete each ordered-pair solution of the given equation and graph the equation.

21)  $x - 3y = 3$  (0, ) ( , 0) (6, )

22)  $3x + 2y = 6$  (0, ) ( , 0) (4, )

Add the polynomials.

23)  $(-5x^2 - 4x - 5) + (8x^2 - 4x - 1)$

Subtract the polynomials.

24)  $(3b^2 + 4b - 1) - (-6b^2 + 7)$

**Find the value of the polynomial for the given replacement value.**

25)  $x^3 + 3x^2 + 4x$  for  $x = 3$

**Evaluate the expression for the given replacement values.**

26)  $yz$  for  $y = -0.3, z = 7.9$

27)  $5x^2 + 10y$  for  $x = 2, y = 9$

28)  $xy$  for  $x = 0, y = -4$

**Evaluate the expression for  $x = -2, y = 3$ .**

29)  $7x - y^2$

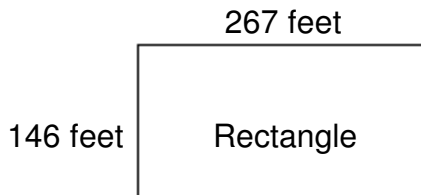
**Multiply.**

30)  $x \cdot x^4$

31)  $8y^4 \cdot 3y^2$

**Find the perimeter.**

32)



**Use the distributive property to rewrite the expression.**

33)  $10(2 + 4)$

**Write using exponential notation.**

34)  $9 \cdot 9 \cdot 9 \cdot 9$

**Simplify.**

35)  $3 \cdot 7 - 3$

36)  $\frac{183 + 7}{3^2 - 4}$

37)  $-4 + 12 - (-13) + 6$

38)  $(x^3)^7$

39)  $|9|$

40)  $|-13|$

41)  $-|-5|$

**Represent the quantity by an integer.**

42)  $35^\circ$  above zero

**Graph the numbers on a number line.**

43) 0, 2, 4, 6

**Insert  $<$  or  $>$  to make the statement true.**

44)  $-55$  \_\_\_\_\_  $-69$

**Find the opposite of the integer.**

45)  $-28$

**Solve.**

46) The temperature at 5 p.m. on January 27 was  $-7^\circ$  Fahrenheit. By 9 p.m. the temperature had risen 25 degrees. Find the temperature at 9 p.m.

**Multiply.**

47)  $(-8)(-4) - (-5)$

**Evaluate.**

48)  $-7^2$

49)  $(-1)^8$

50)  $\left(\frac{1}{5}\right)^3$

51)  $7^4$

**Find the quotient.**

52)  $\frac{-62}{0}$

**Simplify the expression by combining like terms.**

53)  $x - 23y + x + 23y$

**Solve the equation.**

54)  $b + 14 = 19$

55)  $n + 5 = -30 + 7$

56)  $-4x - 19 + 5x = 9$

57)  $2b = -22$

58)  $\frac{n}{5} = 3$

59)  $-6x - 18 = -4x - 2$

60)  $5(x - 1.5) = 9.3$

61)  $-\frac{5}{9}s = \frac{5}{7}$

62)  $2(x + 5) = 4$

**Write the sentence as an equation. Use  $x$  to represent "a number." Solve the equation.**

63) A number added to  $-22$  is equal to  $-35$ .

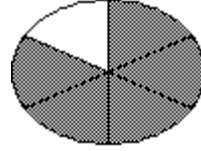
64) Six subtracted from a number equals  $21$ .

**Identify the numerator and the denominator of the fraction.**

65)  $\frac{1}{7}$

**Write a fraction to represent the shaded area of the figure.**

66)



**Graph the fraction on a number line.**

67)  $\frac{7}{6}$

**Write the fraction as an equivalent fraction with the given denominator.**

68)  $\frac{6}{13}$ ; denominator of  $26$

**Write the prime factorization of the number.**

69)  $198$

**Simplify the fraction.**

70)  $\frac{45}{63}$

**Perform the indicated operation. Write the answer in simplest form.**

71)  $\frac{9}{8} \cdot \frac{14}{5}$

72)  $-\frac{8}{11} \div \frac{4}{15}$

**Write the mixed number as an improper fraction.**

73)  $3\frac{4}{5}$

**Write the improper fraction as a mixed or whole number.**

74)  $\frac{33}{5}$

Perform the indicated operation. Write the answer as a mixed number in simplest form.

$$75) 1\frac{3}{8} \cdot \frac{4}{7}$$

Add or subtract as indicated. Write the answer in simplest form.

$$76) \frac{4}{8} + \frac{1}{8} + \frac{2}{8}$$

$$77) \frac{5}{6} - \frac{13}{5}$$

Simplify the complex fraction.

$$78) \frac{\frac{3}{4}}{\frac{6}{7}}$$

Perform the indicated operation.

$$79) 74.42 + 93.45 + 35.196$$

Find the square root.

$$80) \sqrt{324}$$

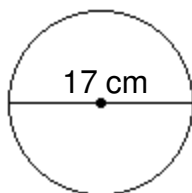
Find the circumference of the circle. Use the approximation 3.14 for  $\pi$ .

Formula:  $C = 2\pi r$  or  $C = \pi d$

81)



82)



Find the unit price.

- 83) Find which is the better buy (lower cost per ounce) by finding each unit price rounded to three decimal places if necessary. Assume that different sizes of the same brand are being compared.

Popcorn:

\$1.20 for 20 ounces

\$1.17 for 18 ounces

Solve the proportion for the given variable.

$$84) \frac{x}{7} = \frac{15}{21}$$

$$85) \frac{15}{75} = \frac{6}{x}$$

Determine whether the proportion is true or false.

$$86) \frac{15}{6} = \frac{5}{2}$$

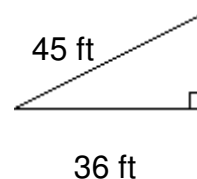
Solve.

- 87) The ratio of a quarterback's completed passes to attempted passes is 3 to 5. If he attempted 20 passes, find how many passes he completed.

Using the given lengths of two sides of a right triangle, find the length of the side not given.

Formula:  $a^2 + b^2 = c^2$

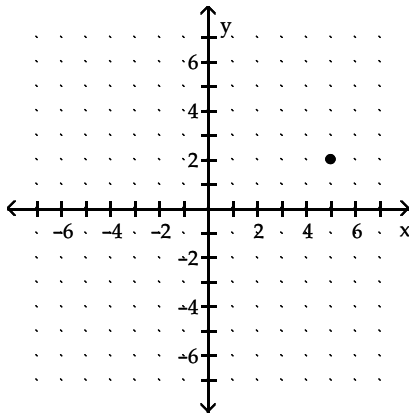
88)



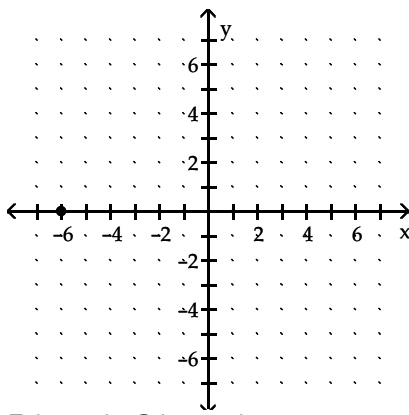
Answer Key

Testname: DSPM0700FINALREVIEW

- 1) 4
- 2) 0.5149
- 3) 0.03
- 4) 210%
- 5) 0.1%
- 6) 15%
- 7)  $.45 ; \frac{9}{20}$
- 8) 5.25 ; 525%
- 9) 4.2; 420%
- 10) 900
- 11) 14
- 12) 150%
- 13) \$12.16
- 14) \$1103.39
- 15) (4, 16), (0, 0), (-4, -16)
- 16) No
- 17) Yes
- 18)

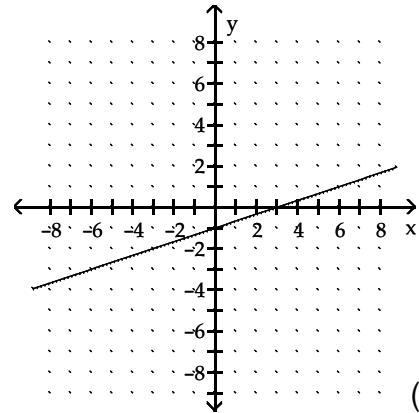


19)



20) R(-2, 3); S(-5, -4)

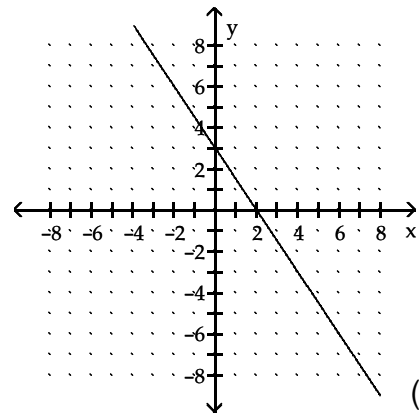
21)



(0, -1) (3,0)

(6, 1)

22)



(0, 3) (2,0)

(4, -3)

- 23)  $3x^2 - 8x - 6$
- 24)  $9b^2 + 4b - 8$
- 25) 66
- 26) -2.37
- 27) 110
- 28) 0
- 29) -23
- 30)  $x^5$
- 31)  $24y^6$
- 32) 826 feet
- 33)  $10 \cdot 2 + 10 \cdot 4$
- 34) 94
- 35) 18
- 36) 38
- 37) 27
- 38)  $x^{21}$
- 39) 9

Answer Key

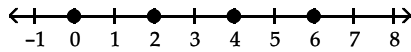
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40) 13

41) -5

42) 35

43)



44)  $-55 > -69$

45) 28

46)  $18^\circ$

47) 37

48) -49

49) 1

50)  $\frac{1}{125}$

51) 2401

52) undefined

53)  $2x$

54) 5

55) -28

56) 28

57) -11

58) 15

59) -8

60) 3.36

61)  $-\frac{9}{7}$

62) -3

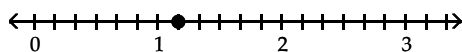
63)  $-22 + x = -35$  ; - 13

64)  $x - 6 = 21$  ; 27

65) numerator: 1  
denominator: 7

66)  $\frac{5}{6}$

67)



68)  $\frac{12}{26}$

69)  $2 \cdot 3^2 \cdot 11$

70)  $\frac{5}{7}$

71)  $\frac{63}{20}$

72)  $-\frac{30}{11}$

73)  $\frac{19}{5}$

74)  $6\frac{3}{5}$

75)  $\frac{11}{14}$

76)  $\frac{7}{8}$

77)  $-\frac{53}{30}$

78)  $\frac{7}{8}$

79) 203.066

80) 18

81) 37.68 yd

82) 53.38 cm

83) \$1.20 for 20 ounces

84) 5

85) 30

86) True

87) 12 passes

88) 27 ft