

## DSPM 0700 FINAL EXAM REVIEW

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

1)  $\frac{5}{21} - \frac{4}{21}$

2)  $\frac{8}{20x} - \frac{17}{20x}$

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

3)  $\frac{-7}{6} + \frac{-1}{12}$

4)  $\frac{-9}{2} + \frac{9}{8}$

Add the polynomials.

5)  $(7a^4 + 6a^3) + (4a^4 - 9a^3)$

Add.

6)  $-36 + (-45)$

7)  $43.04 + 1.599 + 5.81 + 8.3$

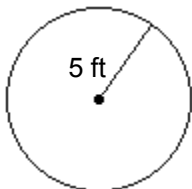
Add. Write the answer in simplest form as a mixed number or a whole number.

$4\frac{1}{2}$

8)  $+ 17\frac{1}{3}$   
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Find the circumference of the circle using 3.14 for  $\pi$ . (Formula:  $C = \pi d$  or  $C = 2\pi r$ )

9)



Determine whether the given value is a solution to the given equation.

10) Is 3 a solution to the equation  $x + 8.5 = 12$ ?

Divide, and round the quotient as indicated.

11) Divide 6.27 by 25 and round the quotient to the nearest hundredths.

Divide.

12)  $-48 \div (0.6)$

Divide. Write all quotients in simplest form.

13)  $\frac{6}{8} \div \frac{2}{11}$

14)  $\frac{9x}{19} \div \frac{9}{10x}$

15)  $-\frac{1}{7} \div -\frac{6}{13}$

16)  $5\frac{2}{9} \div 2\frac{3}{4}$

Evaluate each expression for  $x = -2$ ,  $y = 3$ ,  $z = -4$ .

17)  $\frac{24z}{x}$

18)  $\frac{(-3z)(2x + 2y)}{-9y + 5x}$

Evaluate the given expression using the given values of the variables if necessary.

19)  $-5y$ ;  $y = -2.6$

Evaluate.

20)  $\left(-\frac{7}{4}\right)^2$

Find the absolute value.

21)  $-|-8|$

Find the opposite of each integer.

22)  $-12$

Find the square root.

23)  $\sqrt{\frac{25}{144}}$

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

24)  $x^3 - 4x^2 + 3x$ , when  $x = 2$

Plot the three ordered-pair solutions of the given equation.

25)  $3x - 2y = 6$   $(0, \quad)$ ,  $(\quad, 0)$ ,  $(-1, \quad)$

Multiply.

26)  $\frac{0.387}{x \ 5.3}$

27)  $(-10.5)(4.08)$

28)  $5z^6 \cdot 4z^6$

29)  $-3x \cdot 7x$

**Multiply. Write the product in simplest form.**

30)  $\frac{5}{10} \cdot \frac{6}{22}$

**Multiply. Write answers in simplest form.**

31)  $4\frac{1}{2} \cdot 3\frac{1}{3}$

**Perform each indicated operation. Write all quotients in simplest form.**

32)  $\frac{-4}{5} \div \left( \frac{-4}{6} \cdot \frac{8}{5} \right)$

**Round the decimal to the given place value.**

33) 1.5255 (nearest hundredth)

**Simplify by combining like terms.**

34)  $26.6x - 11.3 - 11.7x + 17.2$

**Simplify each fraction.**

35)  $\frac{33}{42}$

36)  $\frac{20w^3x^2}{45wx}$

**Simplify the expression.**

37)  $(1.6)^2$

**Simplify.**

38)  $-5 + 7 - (-4) + 15$

39)  $\frac{-18 - 90}{-18}$

40)  $\left(\frac{2}{5}\right)^2 \cdot \frac{1}{2}$

**Solve each equation.**

41)  $a - 13 = 8$

42)  $-7m - 21 = -6m - 14$

43)  $5n + 30 = 0$

44)  $14 - v = 28$

45)  $-8b + 8 + 6b = -3b + 13$

46)  $3(2z - 4) = 5(z + 5)$

47)  $\frac{n}{3} = 13$

48)  $-\frac{5}{8}k = \frac{15}{8}$

49)  $\frac{2}{5}x - \frac{1}{3}x = 3$

**Solve each proportion for the given variable. Round the solution where indicated.**

50)  $\frac{x}{22} = \frac{1}{11}$

**Solve the equation.**

51)  $-4.7 = 12.9 - x$

**Solve.**

52) Find the total monthly cost of owning and maintaining a car given the information shown.

Monthly car payment: \$376.

Monthly insurance cost: \$81.

Average cost of gasoline per month: \$54.

Average maintenance cost per month: \$13.

53) In a practice run, a race car driver's speed is clocked at 139.620 mph at the end of his first lap, and at 167.976 mph at the end of the next lap. How much faster was he driving at the end of the second lap?

54) The nutrition chart on a bag of flavored nacho chips says that each serving contains 0.29 grams of cholesterol. The chart also says that there are 6 servings in the bag. How many grams of cholesterol are in the entire bag of nacho chips?

55) There are approximately 2.54 centimeters in 1 inch. How many inches are there in 130 centimeters? (Round to the nearest hundredth.)

56) The ratio of a quarterback's completed passes to attempted passes is 7 to 8. If he attempted 40 passes, find how many passes he completed. Round to the nearest whole number if necessary.

57) 5% of 300 is what number?

58)  $8\frac{1}{2}\%$  of 46 is what number?

**Solve.**

59) 21 is 2% of what number?

60) 5 is what percent of 8?

61) A computer sells for \$767. If the sales tax rate is 9.5%, what is the total price?

**Evaluate the given expression using the given values of the variables if necessary.**

62) Write the equivalent decimal and percent for  $\frac{9}{25}$ .

**Solve. Write the answer in simplest form.**

63) Raya is saving  $\frac{3}{11}$  of her monthly income of \$5742 for retirement. How much money is she setting aside each month for retirement?

**Solve. Write the answers in simplest form.**

64)  $x - \frac{5}{6} = -\frac{7}{9}$

**Subtract the polynomials.**

65)  $(3b^2 + 3b - 7) - (b^2 - 9)$

**Subtract.**

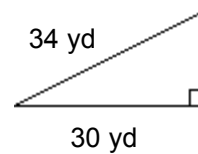
66)  $8.531 - 6.479$

**Subtract. Write the answer in simplest form as a mixed number.**

67)  $12 - 8\frac{1}{9}$

**Using the given lengths of two sides of a right triangle, find the length of the side not given. Round to the nearest thousandth, if necessary. (Formula:  $a^2 + b^2 = c^2$ )**

68)



**Write each fraction or mixed number as a percent.**

69)  $4\frac{1}{2}$

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

70)  $\frac{28}{3}$

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

71)  $6\frac{7}{8}$

**Write each percent as a decimal.**

72) 71.65%

**Write each decimal as a percent.**

73) 6.9

**Write each percent as a fraction in simplest form or write each decimal as a percent.**

74) 16%

**Write each sentence as an equation.**

75) Five times the difference of -15 and 6 yields -105.

76) Nineteen subtracted from -3 yields -22.

**Write each sentence as an equation and solve. Use x to represent "a number."**

77) Twelve subtracted from five times a number is equal to 23.

**Write the decimal as a fraction or mixed number in lowest terms.**

78) 0.864

**Write the fraction as a decimal. Round to the nearest thousandth, if necessary.**

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

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

80) 66

Answer Key

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1)  $\frac{1}{21}$

2)  $-\frac{9}{20x}$

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

4)  $-\frac{27}{8}$

5)  $11a^4 - 3a^3$

6) -81

7) 58.749

8)  $21\frac{5}{6}$

9) 31.4 ft

10) No

11) 0.25

12) -80

13)  $\frac{33}{8}$

14)  $\frac{10x^2}{19}$

15)  $\frac{13}{42}$

16)  $1\frac{89}{99}$

17) 48

18)  $-\frac{24}{37}$

19) 13

20)  $\frac{49}{16}$

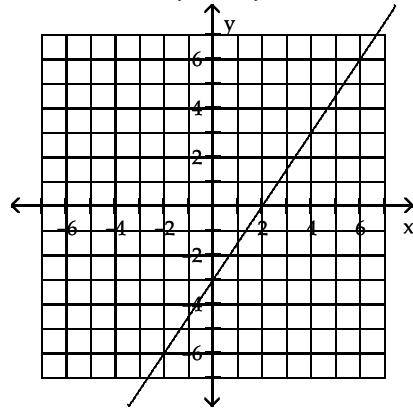
21) -8

22) 12

23)  $\frac{5}{12}$

24) -2

25)  $(0, -3), (2, 0), \left(-1, -\frac{9}{2}\right)$



26) 2.0511

27) -42.84

28)  $20z^{12}$

29)  $-21x^2$

30)  $\frac{3}{22}$

31) 15

32)  $\frac{3}{4}$

33) 1.53

34)  $14.9x + 5.9$

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

36)  $\frac{4w^2x}{9}$

37) 2.56

38) 21

39) 6

40)  $\frac{2}{25}$

41) 21

42) -7

43) -6

44) -14

45) 5

46) 37

47) 39

48) -3

49) 45

50) 2

51) 17.6

52) \$525.59

53) 28.356 mph

54) 1.74 g

55) 51.18 inches

Answer Key

Testname: 700\_TEST\_FINAL\_REV\_ML LH 04F REV.TST

- 56) 35 passes
- 57) 15
- 58) 3.91
- 59) 1050
- 60) 62.5%
- 61) \$839.87
- 62) 0.36; 36%
- 63) \$1566
- 64)  $\frac{1}{18}$
- 65)  $2b^2 + 3b + 2$
- 66) 2.052
- 67)  $3\frac{8}{9}$
- 68) 16 yd
- 69) 450%
- 70)  $9\frac{1}{3}$
- 71)  $\frac{55}{8}$
- 72) 0.7165
- 73) 690%
- 74)  $\frac{4}{25}$
- 75)  $5(-15 - 6) = -105$
- 76)  $-3 - 19 = -22$
- 77)  $5x - 12 = 23$ ; 12
- 78)  $\frac{108}{125}$
- 79) 0.875
- 80)  $2 \cdot 3 \cdot 11$