Math 084 W2010 Quiz 3 Preparation sections 1.7 to 1.8 v02
Dressler

Name_____

Perform the indicated multiplication.

1) $-\frac{24}{35} \cdot \left(\frac{5}{8}\right)$

2) $-\frac{49}{24} \cdot \left(\frac{3}{7}\right)$

3) $-\frac{49}{45} \cdot \left(\frac{5}{7}\right)$

4) $-\frac{27}{32} \cdot \left(\frac{4}{9}\right)$

5) $\frac{1}{5}(-75)$

6) $\frac{19}{7} \cdot (-8)$

7) $\frac{13}{9} \cdot \left(-\frac{13}{2}\right)$

8) $-\frac{32}{49} \cdot \left(\frac{7}{8}\right)$

9) $-\frac{25}{27} \cdot \left(\frac{3}{5}\right)$

10) $\frac{1}{5}(-100)$

11) $\frac{1}{9}(-117)$

12) $\frac{1}{5}(-70)$

13) $\frac{1}{7}(-168)$

14) $\frac{1}{4}(-104)$

15) $\frac{23}{3} \cdot (-9)$

16) $\frac{23}{6} \cdot \left(-\frac{3}{2}\right)$

17) $\frac{17}{2} \cdot (-7)$

18) $\frac{23}{8} \cdot \left(-\frac{8}{7}\right)$

Perform the indicated division or state that the expression is undefined.

19) $33 \div \left(-\frac{11}{4}\right)$

20) $39 \div \left(-\frac{13}{4}\right)$

21) $36 \div \left(-\frac{12}{5}\right)$

22) $24 \div \left(-\frac{12}{5}\right)$

23) $-49 \div 7$

24) $-14 \div 7$

25) $21 \div (-3)$

26) $-161 \div 7$

27) $28 \div (-4)$

28) $11 \div \left(-\frac{11}{3}\right)$

29) $-180 \div 9$

Determine whether the given number is a solution of the equation.

30) $-4m + 11 = -8m + 7;\ -1$

31) $3(x + 5) = 7x - 16;\ -8$

32) $-4m + 16 = -8m + 4;\ -3$

33) $4(x + 5) = 7x - 18;\ -7$

34) $-5m + 16 = -9m + 8;\ -2$

35) $2(x + 6) = 7x - 18;\ -4$

Simplify the algebraic expression, or state that the expression cannot be simplified.

36) $5x^6 + 4x^6$

37) $2x^5 + 3x^5$

38) $4x^6 - 9x^2$

39) $8x^5 - 5x^2$

Simplify the algebraic expression by removing parentheses and brackets.

40) $3[3(x - 5) - 3]$

41) $-8(2x + 3) + 5(5x + 8)$

42) $-7(9x + 8) + 3(8x + 3)$

43) $(10y + 9) - (3y - 7)$

44) $(8y + 8) - (2y - 6)$

45) $7[6(x - 5) - 1]$

46) $6[6(x + 1) - 2]$

47) $5[2(x - 3) + 4]$

48) $1 - 6[5 - (4x - 4)]$

Solve.

49) If a rock falls from a height of 60 meters above the ground, the height H (in meters) after x seconds can be approximated using the formula $H = 60 - 4.9x^2$. What is the height of the rock after 3 seconds?

50) If a rock falls from a height of 50 meters above the ground, the height H (in meters) after x seconds can be approximated using the formula $H = 50 - 4.9x^2$. What is the height of the rock after 2 seconds?

51) If a rock falls from a height of 80 meters above the ground, the height H (in meters) after x seconds can be approximated using the formula $H = 80 - 4.9x^2$. What is the height of the rock after 4 seconds?

Solve.

52) The formula $C = \frac{5}{9}(F - 32)$ expresses the relationship between Fahrenheit temperature, F, and Celsius temperature, C. Use the formula to convert 77°F to it equivalent temperature on the Celsius scale, rounded to the nearest degree.

53) The formula $C = \frac{5}{9}(F - 32)$ expresses the relationship between Fahrenheit temperature, F, and Celsius temperature, C. Use the formula to convert 50°F to it equivalent temperature on the Celsius scale, rounded to the nearest degree.

54) The formula $C = \frac{5}{9}(F - 32)$ expresses the relationship between Fahrenheit temperature, F, and Celsius temperature, C. Use the formula to convert 68°F to it equivalent temperature on the Celsius scale, rounded to the nearest degree.

55) The winning times (in seconds) in a speed–skating event for men can be represented by the formula $T = 46.72 - 0.098x$, where x represents the year, with $x = 0$ corresponding to 1920. (For example in 1992, x would be $1992 - 1920 = 72$.) According to the formula, what was the winning time in 1986? Round to the nearest hundredth.

56) The winning times (in seconds) in a speed–skating event for men can be represented by the formula $T = 46.13 - 0.092x$, where x represents the year, with $x = 0$ corresponding to 1920. (For example in 1992, x would be $1992 - 1920 = 72$.) According to the formula, what was the winning time in 1999? Round to the nearest hundredth.

1) $-\frac{3}{7}$

2) $-\frac{7}{8}$

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

4) $-\frac{3}{8}$

5) –15

6) $-\frac{152}{7}$

7) $-\frac{169}{18}$

8) $-\frac{4}{7}$

9) $-\frac{5}{9}$

10) –20
11) –13
12) –14
13) –24
14) –26
15) – 69

16) $-\frac{23}{4}$

17) $-\frac{119}{2}$

18) $-\frac{23}{7}$

19) –12
20) –12
21) –15
22) –10
23) –7
24) –2
25) –7
26) –23
27) –7
28) –3
29) –20
30) solution
31) not a solution
32) solution
33) not a solution
34) solution
35) not a solution
36) $9x^6$

37) $5x^5$
38) cannot be simplified
39) cannot be simplified
40) 9x – 54
41) 9x + 16
42) –39x – 47
43) 7y + 16
44) 6y + 14
45) 42x – 217
46) 36x + 24
47) 10x – 10
48) 24x – 53
49) 15.9 m
50) 30.4 m
51) 1.6 m
52) 25°C
53) 10°C
54) 20°C
55) 40.25 sec
56) 38.86 sec