Chapter 2 review

Section 2 – 3

1. Which of the following statements is *not* true?

A. 5 + (- 4) = 1 B. 5 + (- 5) = 0 C. (- 5) + 0 = 5

D. (- 5) + (- 4) = - 9

Simplify each of the following.

2. (- 4) + (- 13) + 15 + (- 2) = (-4) + (-13) + (-2) + 15
= (-19) + 15
= $\boxed{-4}$

3. (- 8) + 2x + 15
= (-8) + 15 + 2x
= $\boxed{7+2x}$

4. 12 + 5 = $\boxed{17}$

5. 12 + (- 5) = $\boxed{7}$

6. (- 12) + 5 = $\boxed{-7}$

7. (- 12) + (- 5) = $\boxed{-17}$

8. – [(- 12) + 5] = 12 + (-5) = $\boxed{7}$

9. Evaluate – 13 + (- x) + y if x = - 12 and y = - 7
-13 + (12) + (-7) = -13 + (-7) + 12
= -20 + 12 = $\boxed{-8}$

10. You have $132 in your checking account. You deposit $46 and then make two purchases with your debit card. One for $17 and the other for $93. What is your new balance? 132 + 46 - 17 - 93
= 178 + (-110)
= $68

Section is 2 – 4

Simplify each of the following.

11. 12 – 5 = $\boxed{7}$

12. 12 – (- 5) = 12 + 5 = $\boxed{17}$

13. (- 12) – 5 $= -12 + (-5) = \boxed{-17}$

14. (- 12) – (- 5) $= -12 + 5 = \boxed{-7}$

15. – [(- 12) – 5] $= -[(-12) + (-5)] = 12 + 5 = \boxed{17}$

Section 2 – 5

Use the distributive property to simplify each of the following.

16. (37 x 83) + (37 x 17)

$37(83+17)$

$37(100) = \boxed{3700}$

17. 16($2\frac{1}{8}$)

$\left(\frac{16}{1}\right)\left(\frac{17}{8}\right) = \left(\frac{2}{1}\right)\left(\frac{17}{1}\right) = \boxed{34}$

18. (0.25)(38) + (0.75)(38)

$38[(0.25) + (0.75)]$

$38[1] = \boxed{38}$

19. 12n + 27n

$\boxed{39n}$

Simplify.

20. 5x + 7 + 8x – 3

$5x + 8x + 7 + (-3)$

$\boxed{13x + 4}$

21. 3(x + 2) + 5(x – 3) – 7x + 4

$3x + 6 + 5x - 15 - 7x + 4$

$3x + 5x + (-7x) + 6 + 4 + (-15) = \boxed{1x - 5}$

Section 2 – 6

Simplify

22. (- 7)(- 3) $= \boxed{21}$

23. (5)(- 3) $= \boxed{-15}$

24. (-4)(6) $= \boxed{-24}$

25. $(-3x)(-2y) = \boxed{6xy}$

26. $(-3)(5)(2) = \boxed{-30}$

27. $(-1)(3)(-5)(6) = \boxed{+90}$

28. $2(x - 3y) - 3(x - 2y)$

$2x - 6y - 3x + 6y$

$2x + (-3x) + 6y + (-6y) = \boxed{-x}$

29. $-\frac{1}{2}n + \frac{3}{5}m + \frac{5}{2}n - \frac{8}{5}m$

$\left(\frac{-1}{2}n\right) + \frac{5}{2}n + \frac{3}{5}m + \left(-\frac{8}{5}\right)m = \frac{4}{2}n + \left(\frac{-5}{5}\right)m = \boxed{2n - m}$

Section 2 – 8

Simplify each of the following.

30. $(-\frac{1}{3})(12)(-\frac{3}{4})$

$\left(-\frac{1}{3}\right)\left(-\frac{3}{4}\right)\left(\frac{12}{1}\right) = \frac{12}{4} = \boxed{3}$

31. $\frac{1}{4}(-8a + 4b)$

$\boxed{-2a + b}$

32. $(24x - 12y)(-\frac{1}{6})$

$\boxed{-4x + 2y}$

33. $\frac{1}{2}(4c - 6d) - \frac{1}{3}(6c - 9d)$

$2c - 3d - 2c + 3d = \boxed{0}$

Classify each of the following as true or false.

34. The reciprocal of $\frac{3}{4}$ *is* $\frac{4}{3}$. $\boxed{T}$

35. The multiplicative inverse of $-\frac{2}{3}$ *is* $\frac{3}{2}$. $\boxed{F}$

36. The reciprocal of 0 is 0. $\boxed{F}$

37. The multiplicative inverse of – 1 is 1. $\boxed{F}$

38. The multiplicative inverse of 1.25 is 0.8. $\boxed{T}$

Section 2- 9

Simplify each of the following.

39. $96 \div (-8) = \boxed{-12}$

40. $\dfrac{-9}{-\frac{1}{8}} = -9 \div \left(-\frac{1}{8}\right)$

$= \left(-\frac{9}{1}\right) \cdot \left(-\frac{8}{1}\right) = \boxed{72}$

41. $(-12) \div (36) = \dfrac{-12}{36} = \boxed{-\dfrac{1}{3}}$

42. Find the average of - 21, 19, 5, and – 11. $\dfrac{-21 + (-11) + 19 + 5}{4} = \dfrac{-32 + 24}{4} = \dfrac{-8}{4} = \boxed{-2}$

43. Evaluate $\dfrac{a - 3b}{b - c}$ if a = 9, b = - 2, and c = 3.

$\dfrac{9 - 3(-2)}{-2 - 3} = \dfrac{9 + 6}{-5} = \dfrac{15}{-5} = \boxed{-3}$

Classify each of the following as true or false.

44. $12 \div 4 = 4 \div 12$ $\boxed{F}$

45. $(12 \div 4) \div 3 = 12 \div (4 \div 3)$ $\boxed{F}$

46. $\dfrac{12 - 6}{3} = 4 - 6$ $\boxed{F}$

47. $12 \div \left(-\frac{1}{2}\right) = -6$ $\boxed{F}$

48. $\left(-\frac{1}{2}\right) \div 12 = -\frac{1}{24}$ $\boxed{T}$