7th Grade RED CHAPTER 3 Practice 1

Identify the terms and like terms in the expression. (2pts each)

1) $7j + 3 - 4j + 9$

Terms: _____ $7j$ _____ 3 _____ $-4j$ _____ 9 _____

Like Terms: $7j, -4j$ _____ $3, 9$ _____

2) $10 + 4b + 3a - 15b$

Terms: _____ 10 _____ $4b$ _____ $3a$ _____ $-15b$ _____

Like Terms: $4b, -15b$ _____

3) $x^2 - 3x + 4 + 2x^2 - x - 12$

Terms: _____ x^2 _____ $-3x$ _____ 4 _____ $2x^2$ _____ $-x$ _____ -12

Like Terms: x^2 and $2x^2$, $-3x$ and x, 4 and -12

Find the sum or difference. (2pts each)

4) $(3p - 7) + (5p - 6)$

$$3p + 5p \quad -7 - 6$$
$$8p \quad - 13$$

4) $8p - 13$

5) $\frac{1}{3}(9 - 6y) + \frac{1}{2}(10y - 4)$

$$3 - 2y + 5y - 2$$
$$3y \qquad + 1$$

5) $3y + 1$

Find the sum or difference. (2pts each)

6) $(4y + 3) - (y - 2)$

$4y + 3 - y + 2$

$3y + 5$

6) $\underline{3y + 5}$

7) $(5b - 9) - 3(8 - 2b)$

$5b - 9 - 24 + 6b$

$11b \quad -33$

7) $\underline{11b - 33}$

Factor out the coefficient of the variable. (2pts each)

8) $9x - 36$

$36 \div 9 = 4$

$9(x - 4)$

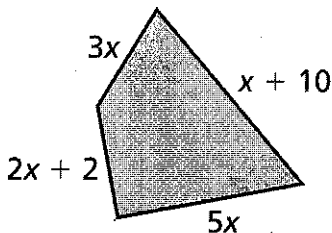8) $\underline{9(x - 4)}$

9) $\frac{1}{5}k + 15$

$\frac{15}{1} \div \frac{1}{5} = \frac{15}{1} \times \frac{5}{1} = 75$

$\frac{1}{5}(k + 75)$

9) $\underline{\frac{1}{5}(k + 75)}$

Write an expression that represents the perimeter of the polygon. (2pts each)
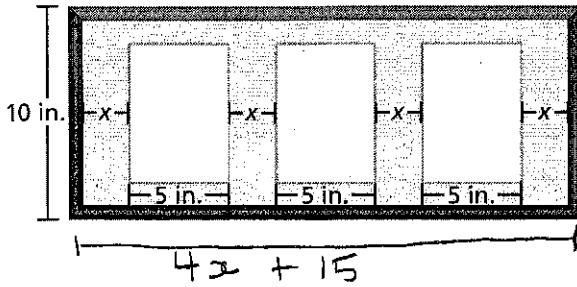
10)

3x

x + 10

2x + 2

5x

expression: $x + 10 + 3x + 2x + 2 + 5x$

$\boxed{11x + 12}$

Write a expression in simplest form that represents the area of the picture frame. (2pts each)

11)

$10\ in.$ ├x┤ ├x┤ ├x┤ ├x┤
├─5 in.─┤ ├─5 in.─┤ ├─5 in.─┤

$4x + 15$

$10(4x + 15)$

answer: $40x + 150$

12) One page of a petition can hold p signatures. You were able to get 4p + 5 people to sign the petition. Your friend was able to get 2p – 3 people to sign the petition. Write an expression that represents the number of people that you and your friend got to sign the petition. (2pts each)

$$4p + 5 \ + \ 2p \ -3$$
$$6p + 2$$

answer: $6p + 2$

Solve the equation. (2pts each)

13) $-8.3 = d + 4.7$

$$\frac{-4.7 \mid -4.7}{-13 = d}$$

13) $d = -13$

14) $-7 = \frac{z}{2} + 1$

$$\frac{-1 \mid -1}{-8 = \frac{z}{2}}$$
$$\times 2 \mid \frac{z}{2} \times 2$$
$$\overline{-16 = z}$$

14) $z = -16$

15) $-0.5x = -4.3$

$$\frac{\div -0.5 \mid \div -0.5}{}$$

$$0.5\overline{)4.3 \overset{8.6}{,0}}$$
$$\underline{-40} \downarrow$$
$$30$$

15) $x = 8.6$

16) $2y - 3y = 5$

$$-1y = 5$$
$$\frac{\div -1 \mid \div -1}{}$$
$$y = -5$$

16) $y = -5$

17) $-2.9 = 3f + 4.3$

$$-4.3 \quad | \quad -4.3$$
$$-7.2 = 3f$$
$$\div 3 \quad | \quad \frac{-3}{-3}$$
$$'29 \quad = f \quad -2.4$$
$$+4.3$$
$$= 7.2 \quad \quad 3\overline{\smash{)}7.2}$$
$$\frac{-6}{12}$$

17) $\underline{f = -2.4}$

Write the word sentence as an equation. Then solve. (2pts each)

18) 11 more than a number q is negative 15.

$$q + 11 = -15$$
$$\underline{-11 \qquad -11}$$
$$q = -26$$

18) $\underline{q = -26}$

19) The difference of a number m and 30 is 10.

$$m - 30 = 10$$
$$\frac{+30 \qquad +30}{m \ = \ 40}$$

19) $\underline{m = 40}$

20) One-third of a number t is equal to 7.

$$\frac{1}{3}t = 7$$
$$\div \frac{1}{3} \quad | \quad \div \frac{1}{3}$$
$$t = 21$$

20) $\underline{t = 21}$

Write the word problem as an equation. Then solve. (3pts each)

21) The monthly dues for a premium membership at a health club is $15 more than the cost of a standard membership. The premium membership is $40 per month. What is the cost of a standard membership?

$$x + 15 = 40$$
$$\underline{-15 \qquad -15}$$
$$x = 25$$

21) $\underline{\$25 \ per \ month}$

Write the word problem as an equation. Then solve. (3pts each)

22) A pack of cardinal flower seeds costs $4, and a pack of petunia flower seeds costs $2.50. You buy the same number of packets of each type of flower and spend $39. How many packs of each do you buy?

$$4x + 2.5x = 39$$
$$6.5x = 39$$
$$\div 6.5 \mid \div 6.5$$
$$x = 6\overline{)390}$$
$$x = 6 \text{ packets}$$

$$\begin{array}{r} \overset{3}{65} \\ \times\ 6 \\ \hline 390 \end{array}$$

---

23) An egg carton holds 12 eggs. A breakfast buffet uses 96 eggs by 8:00A.M. When the buffet ends at 10:30A.M. a total of 156 eggs were used. How many cartons of eggs were used after 8:00A.M.?

23) 5 cartons

$$96 + 12x = 156$$
$$-96 \mid -96$$
$$12x = 60$$
$$x = 5$$