Algebra 1 ECA Remediation   Name___Answer Key___

Homework 26.3
Divide.

1) $(18m^5 + 12m^4 + 3m^3) \div 6m^3$

$$\frac{18m^5}{6m^3} + \frac{12m^4}{6m^3} + \frac{3m^3}{6m^3}$$

$$= 3m^2 + 2m + \frac{1}{2}$$

2) $(4r^4 + 8r^3 + 4r^2) \div 4r^3$

$$\frac{4r^4}{4r^3} + \frac{8r^3}{4r^3} + \frac{4r^2}{4r^3}$$

$$= r + 2 + \frac{1}{r}$$

3) $(4n^3 + 4n^2 + 4n) \div 4n$

$$\frac{4n^3}{4n} + \frac{4n^2}{4n} + \frac{4n}{4n}$$

$$= n^2 + n + 1$$

4) $(2x^3 + 2x^2 + 3x) \div 8x^2$

$$\frac{2x^3}{8x^2} + \frac{2x^2}{8x^2} + \frac{3x}{8x^2}$$

$$\frac{x}{4} + \frac{1}{4} + \frac{3}{8x}$$

Factor the greatest common factor out of each expression.

5) $32b^4a^3 + 28b^4a + 40b$

$$4b(8b^3a^3 + 7b^3a + 10)$$

6) $14x^4y^2 + 7x^2 - 35$

$$7(2x^4y^2 + x^2 - 5)$$

7) $90y^9 + 10y^5x + 30y^2x^2$
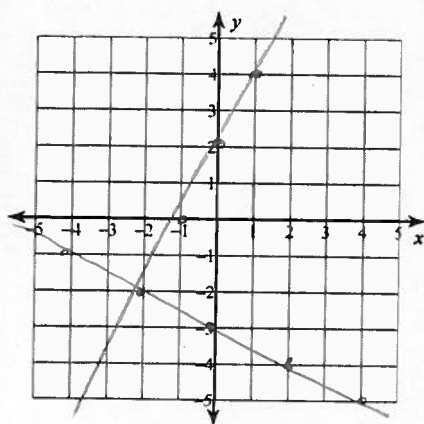
$$10y^2(9y^7 + y^3x + 3x^2)$$

8) $-20a^2b^3 + 18a^2b^2 - 16a$

$$-2a(10ab^3 - 9ab^2 + 8)$$

Solve each system by graphing.

9) $y = -\dfrac{1}{2}x - 3$ ①

   $y = 2x + 2$ ②
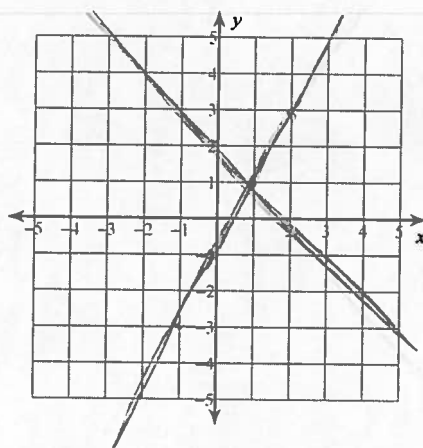
① $m = \dfrac{-1}{2}$

$b = -3$

② $m = 2$

$b = 2$

$(-2, -2)$

10) $y = -x + 2$ ①

    $y = 2x - 1$ ②

① $m = -1$

$b = 2$

② $m = 2$

$b = 1$

$(1, 1)$

Homework 26.3

11) Half of your baseball card collection got wet and was ruined. You bought 13 cards to replace some that were lost. How many did you begin with if you now have 42?

$$\frac{1}{2}x + 13 = 42$$
$$\underline{\phantom{\frac{1}{2}x} -13 \quad -13}$$
$$\frac{1}{2}x = 29$$
$$(2) \qquad\qquad (2)$$
$$x = 58$$

12) On Tuesday Stephanie bought eight hats. On Wednesday half of all the hats that she had were destroyed. On Thursday there were only 20 left. How many did she have on Monday?

$$\frac{1}{2}(x+8) = 20$$
$$\frac{1}{2}x + 4 = 20$$
$$\underline{\phantom{\frac{1}{2}x} -4 \quad -4}$$
$$(2)\ \frac{1}{2}x = 16 \ (2)$$
$$x = 32$$

Answers to Homework 26.3

1) $3m^2 + 2m + \dfrac{1}{2}$

2) $r + 2 + \dfrac{1}{r}$

3) $n^2 + n + 1$

4) $\dfrac{x}{4} + \dfrac{1}{4} + \dfrac{3}{8x}$

5) $4b(8a^3b^3 + 7ab^3 + 10)$

6) $7(2x^4y^2 + x^2 - 5)$

7) $10y^2(9y^7 + xy^3 + 3x^2)$

8) $2a(-10ab^3 + 9ab^2 - 8)$

9) $(-2, -2)$

10) $(1, 1)$

11) 58

12) 32