

11-22-19

1. Solve the following equation for all possible values of x.

$$(x - 9)(4x + 20) = 0$$

2. Solve the following equation for x.

$$8y + 5(x - 3) = 28y$$

3. Use your new equation from #2 to determine the value of x when y = 3.

1. Solve the following equation for all possible values of x.

$$(x - 9)(4x + 20) = 0$$

$$x - 9 = 0$$

$$\underline{+9} \quad \underline{+9}$$

$$x = 9$$

$$4x + 20 = 0$$

$$\underline{-20} \quad \underline{-20}$$

$$\underline{4x} = \underline{-20}$$

$$\underline{4} \quad \underline{4}$$

$$x = -5$$

$$x = -5, 9$$

2. Solve the following equation for x.

$$8y + 5(x - 3) = 28y$$

$$8y + 5x - 15 = 28y$$

$$\underline{-8y} \qquad \underline{-8y}$$

$$5x - 15 = 20y$$

$$\underline{+15} \quad \underline{+15}$$

$$\underline{5x = 20y + 15} \quad \longrightarrow \quad x = 4y + 3$$

5

3. Use your new equation from #2 to determine the value of x when y = 3.

$$x = 4(3) + 3$$

$$x = 12 + 3$$

$$x = 15$$

Reminders for the final....

- Bring a calculator.
- Bring your study guide. This is a grade!
- You may use all summary sheets as long as they have been GRADED.
- Get a good night's sleep!

Find the following sum and/or difference. Identify the degree as well as naming the polynomial.

$$(4x^2 - 7x + 2) - 3(2x^2 + 10x - 5)$$

$$4x^2 - 7x + 2 - 6x^2 - 30x + 15$$
$$(4x^2 - 6x^2) + (-7x - 30x) + (2 + 15)$$

$$-2x^2 - 37x + 17$$

Degree: 2

Name: Trinomial

c1

Solve the equation for x. Leave your answer as a fraction if necessary.

$$4x + 2(x - 5) = 14$$

$$4x + 2x - 10 = 14$$

$$6x - 10 = 14$$

$$6x = 24$$

$$x = 4$$

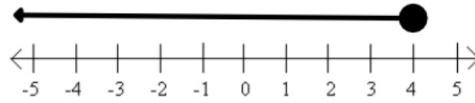
c2

Solve the inequality and graph the solution.

$$2(y + 4) \leq 16$$

$$2y + 8 \leq 16$$
$$2y \leq 8$$

$$y \leq 4$$



c3

Solve the following equation for all possible values of x .

$$(x - 3)(2x + 10) = 0$$

$$x - 3 = 0$$
$$x = 3$$

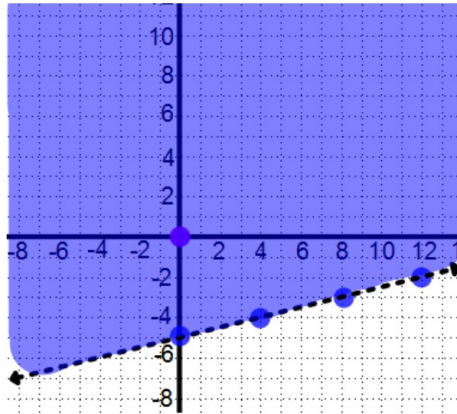
$$2x + 10 = 0$$
$$2x = -10$$
$$x = -5$$

$$x = -5 \text{ or } 3$$

c4

Graph the following inequality. Shade the half-plane appropriately.

$$y > \frac{1}{4}x - 5$$



c5

Find the following product.

$$4x^2(12x^3 - 2x^2 + 7)$$

$$48x^5 - 8x^4 + 28x^2$$

c1

Solve the equation for x.

$$\frac{x}{4} = \frac{x-3}{2}$$

$$\frac{x}{4} = \frac{x-3}{2}$$

$$4(x - 3) = 2x$$

$$4x - 12 = 2x$$

$$-12 = -2x$$

$$6 = x$$

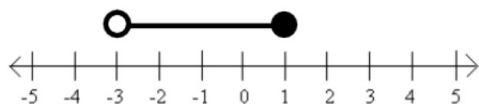
c2

Solve the inequality and graph the solution.

$$-5 < 2x + 1 \leq 3$$

$$-6 < 2x \leq 2$$

$$-3 < x \leq 1$$



c3

Solve the following equation for all possible values of x.

$$3x^2 + 9x = 0$$

$$x(3x + 9) = 0$$

$$x = 0 \quad 3x + 9 = 0$$

$$3x = -9$$

$$x = -3$$

or...

$$3x(x + 3) = 0$$

$$3x = 0$$

$$x = 0$$

$$x + 3 = 0$$

$$x = -3$$

$$x = -3 \text{ or } 0$$

c4

Solve the following systems of equations using **elimination**.

$$6x + 5y = 19$$

$$-2x + 4y = -12$$

$$6x + 5y = 19$$

$$3(-2x + 4y = -12)$$

$$6x + 5y = 19$$

$$\underline{-6x + 12y = -36}$$

$$17y = -17$$

$$y = -1$$

$$6x + 5(-1) = 19$$

$$6x - 5 = 19$$

$$6x = 24$$

$$x = 4$$

$$(-1, 4)$$

c6

Find the following sum and/or difference. Identify the degree as well as naming the polynomial.

$$(11x^3 - 2x^2 + 4) + 2(x^2 + 5)$$

$$11x^3 - 2x^2 + 4 + 2x^2 + 10$$

$$11x^3 + (-2x^2 + 2x^2) + (4 + 10)$$

$$11x^3 + 14$$

Degree: 3

Name: Binomial

c1

Solve the equation for x. Leave your answer as a fraction if necessary.

$$16 + \frac{4}{3}x - 9 = 15$$

$$\frac{4}{3}x + 7 = 15$$

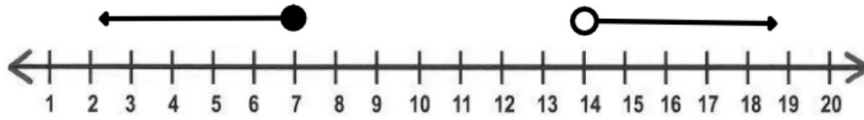
$$^3(\frac{4}{3}x = 8)$$

$$4x = 24$$

$$x = 6$$

c2

Write an inequality whose solution is shown below.



$$x \leq 7 \text{ or } x > 14$$

$$x + 1 \leq 8 \text{ or } x + 1 > 15$$

c3

Solve the system of equations using **substitution**.

$$3x - 5y = 26$$

$$y = 2x - 1$$

$$3x - 5(2x - 1) = 26$$

$$3x - 10x + 5 = 26$$

$$-7x + 5 = 26$$

$$-7x = 21$$

$$x = -3$$

$$y = 2(-3) - 1$$

$$y = -6 - 1$$

$$y = -7$$

$$(-3, -7)$$

c6

Find the following product.

$$(3x^2 - 11)(9x + 4)$$

$$27x^3 + 12x^2 - 99x - 44$$

c1

Solve the equation for x. Leave your answer as a fraction if necessary.

$$3x + 18 = x + 24$$

$$2x + 18 = 24$$

$$2x = 6$$

$$x = 3$$

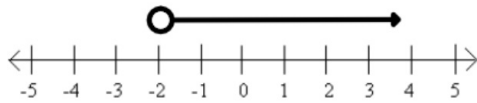
c2

Solve the inequality and graph the solution.

$$3k - 5 > 2k - 7$$

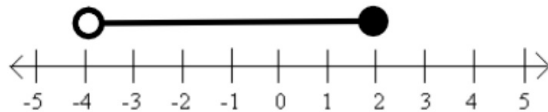
$$k - 5 > -7$$

$$k > -2$$



c3

Write an inequality whose solution is shown below.



$$-4 < x \leq 2$$

$$-5 < x - 1 \leq 1$$

c3