SOLUTIONS

Math 111: Quiz 1 Name

Please show all of your work.

1. Solve for x:

$$5(2x-4) = 3x - (x+1)$$

$10x - 20 = 3x - x - 1$

$10x - 20 = 2x - 1$

$-2x \quad\quad -2x$

$8x - 20 = -1$

$+20 \quad\quad +20$

$8x = 19$

$x = 19/8$

2. Use the properties of exponents to simplify the following expression:

$$\frac{5x^3y^3}{15x^5y^2}$$

$$\frac{5 \cdot x \cdot x \cdot x \cdot y \cdot y \cdot y}{15 \cdot x \cdot x \cdot x \cdot x \cdot x \cdot y \cdot y} = \frac{5 \cdot y}{5 \cdot 3 \cdot x \cdot x} = \frac{y}{3x^2}$$

$$= \frac{1}{3} y x^{-2}$$

3. Rewrite in standard notation:

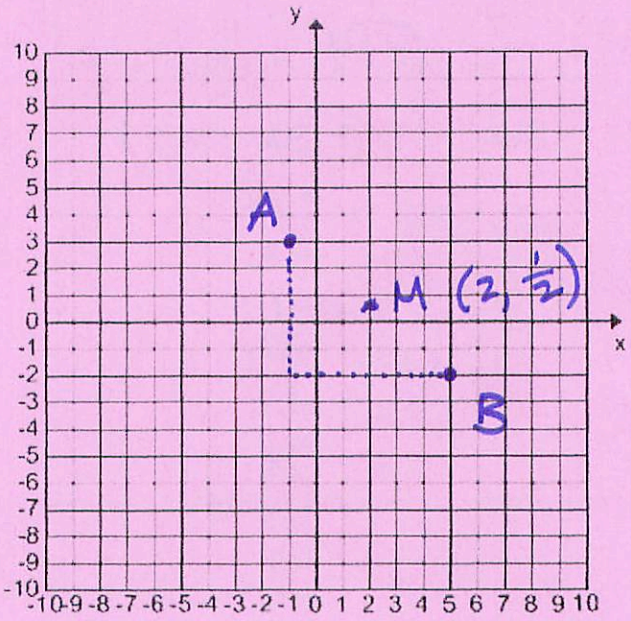
4.738×10^{-4}

Move 4 places

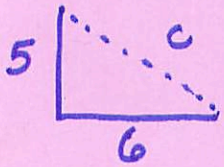
0.0004738

4. Let A be the point (-1,3) and B be the point (5, -2).

a) Plot the points A and B on the graph below. Be sure to label your points.



b) Find the distance between A and B.



$5^2 + 6^2 = c^2$

$25 + 36 = c^2$

$61 = c^2$

$\sqrt{61}$ is the distance

c) Find the midpoint of A and B.

Average of x-values $\frac{-1+5}{2} = \frac{4}{2} = 2$

Average of y-values $\frac{3+-2}{2} = \frac{1}{2}$

$(2, \frac{1}{2})$