Algebra II Chapter 1 Review v.05

1) Evaluate each: a) $6 + 3 \cdot 10 \div 2$ b) $(-2)^2 - (9 - 4)$ c) $3x - 4y$ when $x = -2$ and $y = 5$

2) If $y = -3x^2 - 4x + 2$ find y when a) $x=2$ b) $x = -1$ c) for what values of x will $y = 0$?

3) Solve each of the following: a) $3x - 5 = 17$ b) $\frac{1}{2}x - \frac{1}{3} = \frac{2}{3}x - \frac{1}{6}$ c) $-1.2(x + 2) = 2.3$

d) $3(x + 1) = 10(x - 3) + 2$ e) $|x - 4| = 12$ f) $|2x + 9| = 15$

4) Solve each equation for y: a) $4x + y = 8$ b) $5x + 7xy = 12$

5) Solve each and graph: a) $3x - 8 < 9$ b) $3 - 2x \geq 4(x - 1)$ c) $-2 \leq 2x + 1 < 9$

d) $|3x - 1| < 4$ e) $\left|\frac{x}{2} + 1\right| \geq 10$

6) Find the circumference and area of a semi-circle with radius 20 in.

7) 1000 people went to the fair. If the fair charged $2 per child and $3 per adult and made a total of $2600, how many children and how many adults went?

8) A right triangle has legs that are 20 and 15. What is the length of the hypotenuse?

Answers:

1. a) 21 b) -1 c) -26
2. a) -18 b) 3 c) -1.7208 & 0.38743
3. a) 22/5 b) -1 c) -3.92 d) 31/7 e) 16 or -8 f) 3 or -12
4. a) $y = 8-4x$ b) $y = (12 - 5x)/(7x)$
5. a) $x < 17/3$ b) $7/6 \geq x$ c) $-3/2 \leq x$ and $x \leq 4$ d) $-1<x$ and $x<5/3$ e) $x \geq 18$ or $x \leq -22$
6. $C= 20\pi$, $A=200\pi$
7. adults = 600, children = 400
8. 25