

Midterm Review Day 2

Date _____ Period _____

1) $(6x^2 + 10x - 9) + (8x^3 + 6x^2 + 13x - 11)$

2) $(7x^2 + 10x - 9) - (6x^2 + 12x - 11)$

3) $6x^2(8x - x^2 + 10)$

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

Factor the following.

5) $18x^3y - 3x^2y$

6) $16x^2 - 64y^2$

7) $49x^2 - 25$

8) $x^2 - 16x + 39$

9) $x^2 - x - 56$

10) $x^2 + 12x - 85$

11) $12x^2 + 16x + 5$

12) Solve:
 $(7x - 6)(x + 3) = 0$

13) Solve by factoring:
 $x^2 + 9x = 36$

14) Solve by using the quadratic formula:

$$3x^2 + 4x = -7$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

15) Solve by using the quadratic formula:

$$4x^2 - x - 30 = 0$$

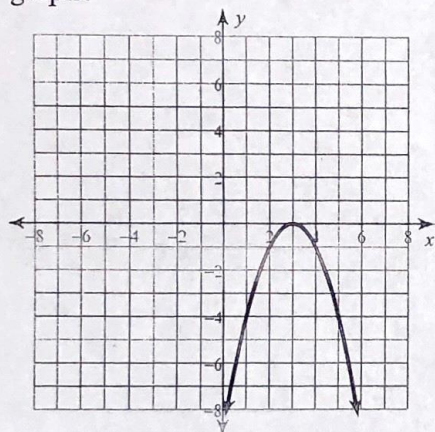
16) Solve by using square roots.

$$4x^2 - 64 = 0$$

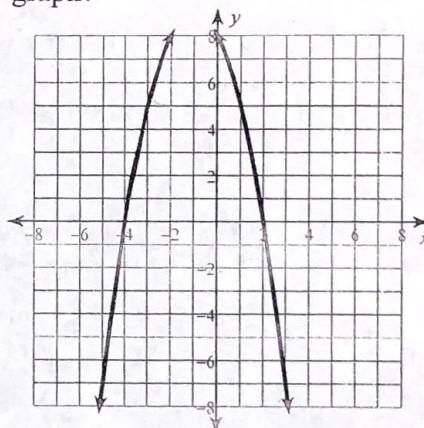
17) Solve by using square roots.

$$(x - 7)^2 = 196$$

18) What does the discriminant say about the graph?



19) What does the discriminant say about the graph?



20) What does the discriminant identify about the equation $3x^2 - 7x + 11 = 0$?