Show your work for all problems.

Solve the following by factoring.

1) $x^2 + 6x + 8 = 0$

$$2) \quad x^2 - 13x = x - 45$$

$$x=9$$
 $x=5$

3)
$$7x^2 + 14x - 245 = 0$$

$$x = -7$$
 $x = 5$

4)
$$8x^2 = 48x$$

Solve the following using the square root method. Be sure to simplify all radicals.

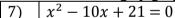
5)
$$x^2 - 17 = 1$$

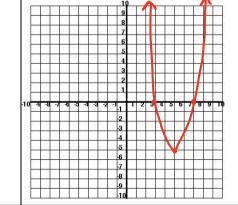
$$x = \pm 3\sqrt{2}$$

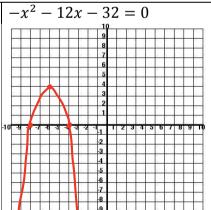
$$6) \quad 25x^2 + 4 = 53$$

$$x = \pm \frac{7}{5}$$

Solve the following by graphing. Be sure to identify the solution.







Solve the following using the quadratic formula. Be sure to simplify all radicals.

x = 3

x=7

9)
$$-2x^2 + 12x + 14 = 0$$

10)
$$x^2 + 6x + 14 = 0$$