Week 5: Quadratic equations

Solutions

Solve

1.
$$x^2 = 9$$

Solution:
$$x = +3, -3$$

2.
$$x^2 - 2x - 8 = 0$$

Solution:
$$x = 4, -2$$

3.
$$3x^2 + 7x - 6 = 0$$

Solution:
$$x = 2/3, -3$$

4.
$$6x^2 = x + 2$$

Solution:
$$x = 2/3, -1/2$$

5.
$$4a^2 - 25 = 0$$

Solution:
$$a = 2.5, -2.5$$

6.
$$12y^2 - 10 = 26y$$

Solution:
$$y = 5/2, -1/3$$

7.
$$6a^2 - 15a = 0$$

Solution:
$$a = 0, 5/2$$

8.
$$3b^2 + 5b = 3$$

Solution:
$$b = 0.4684, -2.135$$

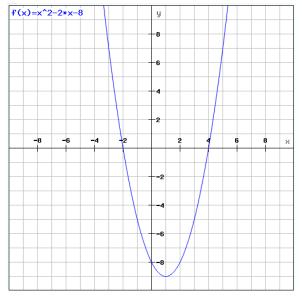
9.
$$-4x^2 + 2x + 1 = 0$$

Solution:
$$x = -0.3090, 0.8090$$

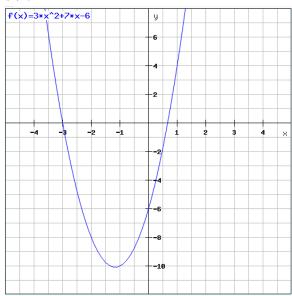
10. Sketch the curves

Solution:

(a)
$$y = x^2 - 2x - 8$$



(b)
$$y = 3x^2 + 7x - 6$$



(c)
$$y = -4x^2 + 2x + 1$$

