Answer on Question #56096 – Math – Algebra

1. The graph of y = $3x^2$ -4x + 2 opens downward.

A: True

B: False

Solution: 3>0 so the graph of y opens upward.

Answer: B: False

2. The graph of y =$2x^2$ -4x – 2 has a y-intercept of (0,2)

A: True

B: False

Solution: y(0)=2*0-4*0-2=-2

Answer: B: False

3. What is the axis of symmetry for the graph of y =$2x^2 - 8x + 2$?

Solution: $y = 2x^2 - 8x + 2 = 2(x - 2)^2 - 6$, hence x =2 is the axis of symmetry for the graph of

y = $2x^2 - 8x + 2$

Answer: x =2.

4. What is the vertex for the graph of y – 4 = -(x + 1)^2 ?

A: (4,-1)

B: (1,-4)

C: (-1,4)

D: (-4,1)

Solution: Function y $= -(x + 1)^2 + 4$ is written in vertex form, where $(h, k) = (-1,4)$ is the vertex.

Answer: C: (-1,4)

5. What are the x-intercepts for the graph of y=3(x-1)(x+6)

A: (-1,0) and (6,0)

B: (1,0) and (-6, 0)

C: (0, -1) and (0,6)

D: (0,1) and (0,-6)

Solution: Function y=3(x-1)(x+6) is written in intercept form, hence the x-intercepts are (1,0) , (-6, 0).

Answer: B: (1,0) and (-6, 0).

9. What is the vertex of the graph of this function?

y = -(x+2)(x+4)

A: (-2,-4)

B: (3,-35)

C: (-3,1)

D: (-3,-1)

Solution: $y = -(x + 2)(x + 4) = -(x^2 + 6x + 8) = -(x^2 + 6x + 9 - 1) = -(x + 3)^2 + 1$. Function

y $=-(x + 3)^2 + 1$ is written in vertex form, where $(h, k) = (-3,1)$ is the vertex.

Answer: C: (-3,1)

10. The point (-1,0) lies on the graph of the function y $=2x^2$ -8x + 6

A: True

B: False

Solution $y(-1) = 2 + 8 + 6 = 16 \neq 0$

Answer: B: False.