

# Transformations of Parabolas Bell Work

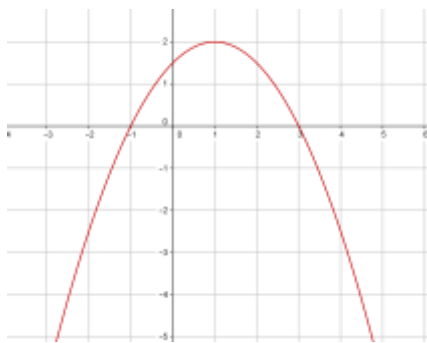
1. Find the vertex of this parabola:  $y = 15(x-3)^2 + 6$ .

- a.  $(-3, -6)$
- b.  $(-3, 6)$
- c.  $(3, 6)$
- d.  $(3, -6)$

2. Write the equation of the parabola having the vertex  $(1.5, 2.5)$  and the point  $A(3, 9)$

- a.  $y = 3(x-1.5)^2 + 2.5$
- b.  $y = 3(x+1.5)^2 + 2.5$
- c.  $y = 3(x-1.5)^2 - 2.5$
- d.  $y = 1.5(x-2.5)^2 - 3$

3. What is the equation of the parabola below?



- a.  $y = 2(x-1)^2 + 2$
- b.  $y = -2(x-1)^2 - 2$
- c.  $y = 0.5(x+1)^2 + 2$
- d.  $y = -0.5x^2 + x + 1.5$

4. Choose that best describes the transformation of  $y = x^2$  to  $y = 7(x-4)^2 + 10$

- a. Translate 10 units right, vertical stretch by factor of 7, translate 4 units up.
- b. Translate 4 units right, vertical stretch by factor of 7, translate 10 units up.
- c. Translate 7 units right, vertical stretch by factor of 10, translate 4 units up.
- d. Translate 4 units right, vertical stretch by factor of 10, translate 10 units up.

5. What is the vertex form of this standard equation:  $y = -8x^2 + 16x + 12$

- a.  $y = -8(x+(-1))^2 + 20$
- b.  $y = -8(x+(-1))^2 - 20$
- c.  $y = 8(x-(-1))^2 + 20$
- d.  $y = -16(x+(-1))^2 - 20$

Name: \_\_\_\_\_ Period: \_\_\_\_\_ Date: \_\_\_\_\_

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### Answers:

1. c
2. a
3. d
4. b
5. a