

# ANSWER PRESENTATION TOOL

Algebra 2 - Student Editi

2

Chapter Test

1-11

ALL EVEN

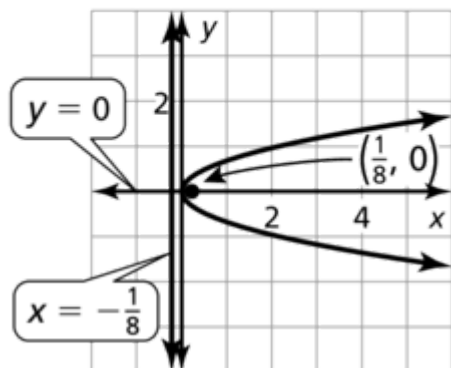
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1.  $(2, 5)$ ; If the point  $(2, 1)$  is on the parabola,  $(2, 5)$  must also be on the parabola because it is the reflection in the line of symmetry.

2.  $g(x) = (-2x + 5)^2 - 5$

3. The focus is  $(\frac{1}{8}, 0)$ , the directrix is  $x = -\frac{1}{8}$ , and the axis of symmetry is  $y = 0$ .



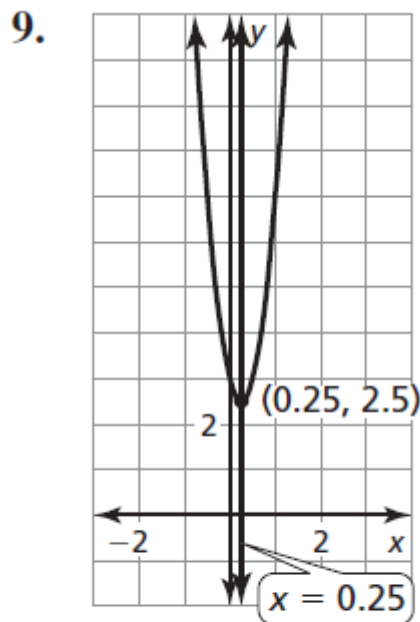
4. The second differences are constant;  $f(x) = -x^2 - 0.5x + 5$

5.  $y = -\frac{1}{28}(x + 3)^2 + 2$ ; Use the focus and vertex to solve for  $p = -7$ , and substitute  $p$  and  $(h, k)$  into  $y = \frac{1}{4p}(x - h)^2 + k$ .

6.  $y = -\frac{1}{4}(x + 1)(x - 7)$ ; Substitute the given information into intercept form and use (5, 3) to solve for  $a$ .

7.  $x = \frac{1}{16}y^2 + 2$ ; Use the directrix and the vertex to solve for  $p = 4$  and substitute  $p$  and  $(h, k)$  into  $x = \frac{1}{4p}(y - k)^2 + h$ .

8. \$450; \$20,250; (5, 20,250) is the maximum of the equation  $P = (40 + x)(500 - 10x)$ .



The function is decreasing to the left of  $x = 0.25$  and increasing to the right of  $x = 0.25$ .

10. a.  $y = \frac{1}{40}x^2$

b. about 8.56 ft; Substitute  $\frac{37}{2}$  into the function from part (a).

11.  $p(t) = 28.17t^2 + 45.65t + 617.49$ ; \$3890.99