

Pre-Cal CW 2.1-Quadratics

Convert the following to vertex form:

1. $y = x^2 - 5x + 1$

2. $y = 2x^2 - 12x - 5$

3. Find the equation of the parabola with a vertex of $(-3, 2)$ that passes through the point $(-1, 1)$.

Find the vertex for:

4. $y = 2x^2 - 8x + 1$

5. $y = -3x^2 + 5x + 1$

Write the following in factored form:

6. $y = x^2 - 5x - 14$

7. $y = 2x^2 - 3x - 14$

Convert the following to standard form:

8. $y = -3(x - 2)^2 - 5$

9. $y = 4(x - 2)(x + 3)$

A sling shot's trajectory shooting a marble can be modeled by $h(t) = -3t^2 + 24t + 7$ where $h(t)$ is the height in feet and t is the time in seconds.

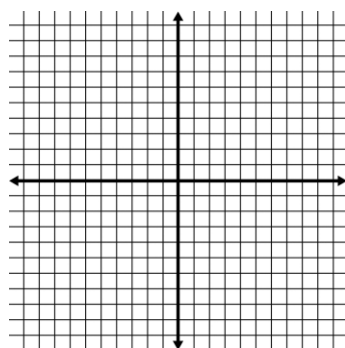
10. Find the highest point that the marble travels.



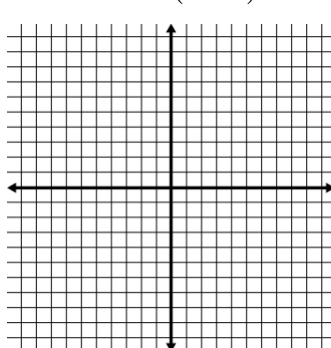
11. At what time does reach the highest point?

Graph the following: (use 5 points)

12. $y = x^2 - 2x - 8$



13. $y = -3(x - 2)^2 + 3$



14. $y = 2(x - 1)(x + 3)$

