***Real-Life Quadratic Functions Homework***

**GEOMETRY For Exercises 1–3, use the following information.**

The quadratic equation $A = 6x^{2}$ models the area of a triangle with base 3*x* and height 4*x*.

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| **1.** Graph the equation. Explain why you only need to graph the function in the upper right quadrant.CCSS_C3_Ch4_L8_PS_1.jpg | **2.** Explain how to find the area of the triangle when *x* = 3 inches. Then find the area. |
| **3.** Explain how to use your graph to determine the value of *x* when the area is 24 square inches. Then find the base and height of the triangle when its area is 24 square inches. | **4. PHYSICS** The quadratic equation $K = 500s^{2}$ models the kinetic energy in joules of a 1,000-kilogram car moving at a speed of *s* meters per second. Graph this function. Then use your graph to estimate the kinetic energy at a speed of 8 meters per second.CCSS_C3_Ch4_L8_PS_4.jpg |
| **5. CARS** The quadratic equation $d=\frac{s^{2}}{20}$models the stopping distance in feet of a car moving at a speed of *s* feet per second. Graph this function. Then use your graph to estimate the stopping distance at a speed of 40 feet per second.CCSS_C3_Ch4_L8_PS_5.jpg |  |