What is the solution set for the equation

$$4x^2 + 11x - 10 = -7?$$

**F** {−3, 0.25}

**G** {−3.47, 0.72}

**H** {3, −0.25}

**J** {−3.85, 1.1}

Dec '06 Obj 5 - # 24

How does the graph of $y = 7x^2$ differ from the graph of $y = x^2$?

**A** The vertex of the graph of $y = 7x^2$ is 7 units higher.

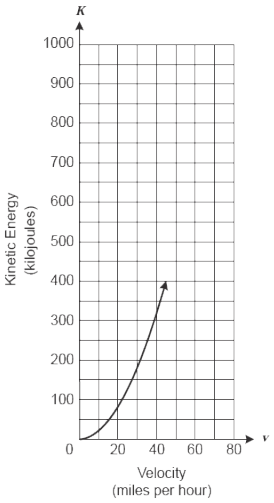
**B** The vertex of the graph of $y = 7x^2$ is 7 units lower.

**C** The graph of $y = 7x^2$ is wider.

**D** The graph of $y = 7x^2$ is narrower.

Oct '06 Obj 5 - # 3

The graph shows the relationship between a 1-ton car's kinetic energy, $K$, and its velocity, $v$. If the kinetic energy of the car is proportional to the square of its velocity, then its kinetic energy when traveling at 60 miles per hour is about —




**A** 320 kilojoules

**B** 480 kilojoules

**C** 720 kilojoules

**D** 1280 kilojoules

Dec '06 Obj 5 - # 31

Which expression describes the area in square units of a rectangle that has a length of $10x^3y^4$ units and a width of $5x^2y$ units?

**F** $2x^5y^4$

**G** $15x^5y^5$

**H** $50x^5y^4$

**J** $50x^5y^5$

Oct '06 Obj 5 - # 4

The formula for the volume of a cylinder with a height of 5 units can be represented as $y = 5\pi x^2$, where $x$ represents the radius. If the cylinder's height is tripled, what is the effect on the graph of $y$ as a function of $x$?

**F** The graph is translated up.

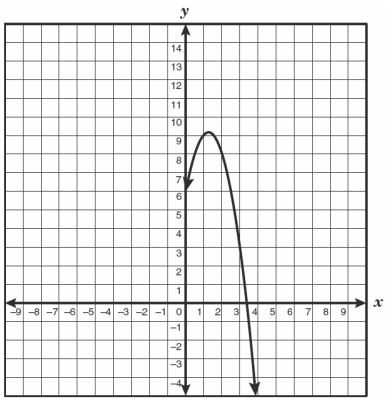
**G** The graph remains the same.

**H** The graph becomes narrower.

**J** The graph becomes wider.

Dec '06 Obj 5 - # 44

Part of the graph of a quadratic equation is shown below. If the line of symmetry for this quadratic equation is $x = 1.25$, between which two integers will the other part of the graph intersect the $x$-axis?




**A** −4 and −3

**B** −3 and −2

**C** −2 and −1

**D** −1 and 0

Oct '06 Obj 5 - # 25