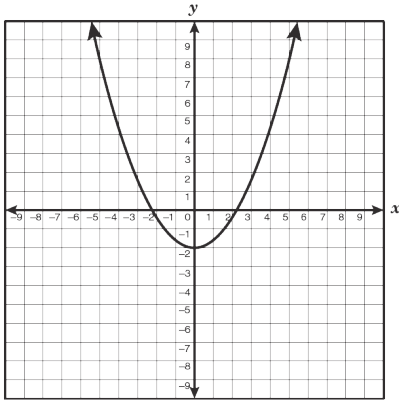


Objective 5 - Page 1 of 6

The graph of the equation $y = 0.4x^2 - 2$ is shown below. If the graph is translated 3 units up, what will be the equation of the resulting graph?



- A $y = 0.4x^2 + 1$
- B $y = 0.7x^2 - 2$
- C $y = 0.4x^2 + 5$
- D $y = 3.4x^2 - 2$

July '06 Obj 5 - # 1

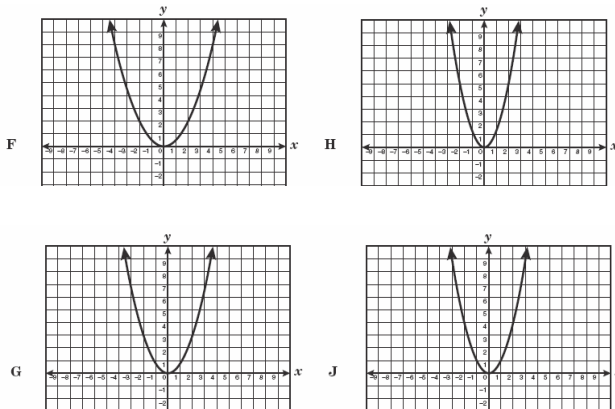
Look at the equations shown below. Which of the following statements is true for the graphs of all the equations given?

$$y = \frac{4}{5}x^2 + 3, \quad y = \frac{4}{5}x^2, \quad y = \frac{4}{5}x^2 - 5, \quad y = \frac{4}{5}x^2 + \frac{3}{5}$$

- A The graphs are congruent and open downward.
- B The graphs open upward and are symmetrical about the y-axis.
- C The graphs are congruent and are listed from narrowest to widest.
- D The graphs open downward and are symmetrical about the y-axis.

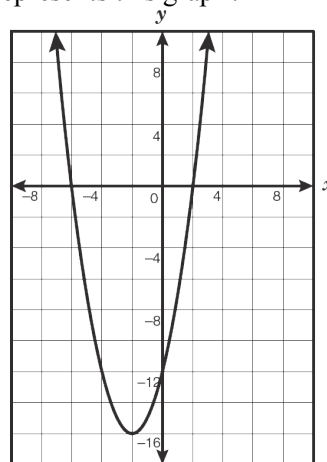
July '06 Obj 5 - # 51

The graphs below represent functions of the form $y = ax^2$. In which of the following graphs does a have the smallest value?



July '06 Obj 5 - # 12

Which of the following polynomial equations best represents this graph?



- A $(x + 6)(x - 2) = y$
- B $(x - 2)(x - 16) = y$
- C $(x - 6)(x + 2) = y$
- D $(x + 2)(x + 16) = y$

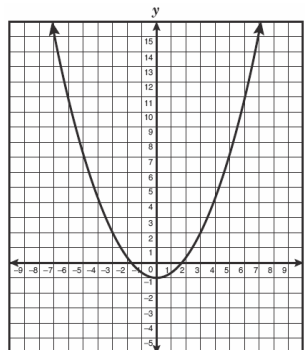
July '06 Obj 5 - # 53

The mass of Earth is close to 5.97×10^{24} kilograms, and the mass of Venus is close to 4.87×10^{24} kilograms. What is the combined mass of both planets?

- A 1.08×10^{25} kg
- B 2.91×10^{49} kg
- C 1.08×10^{48} kg
- D 1.10×10^{24} kg

July '06 Obj 5 - # 23

The graph of a function of the form $y = ax^2 + c$ is shown below. If the graph is translated only up or down to include the ordered pair (6, 7), which of the following equations best represents the resulting graph?



- A $y = -\frac{1}{3}x^2 + 3$
- B $y = \frac{1}{3}x^2 + 1$
- C $y = -\frac{1}{3}x^2 - 10$
- D $y = \frac{1}{3}x^2 - 5$

April '06 Obj 5 - # 7