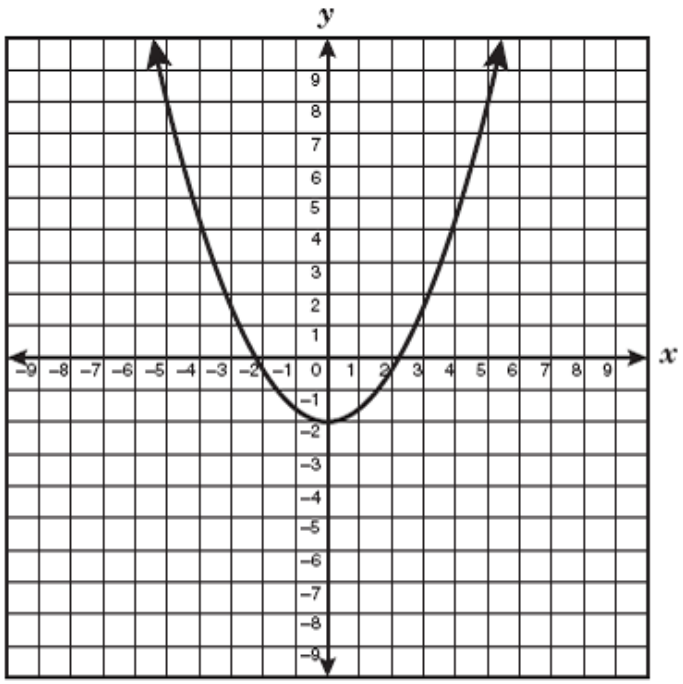
NAME_____**DATE**_____**PERIOD**_____

EOC REVIEW: RC#5

1. 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 $y = 3.4x^2 - 2$

2. Look at the equations shown below.

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

Which of the following statements is true for the graphs of all the equations given?

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.

3. 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 $2x^5y^4$

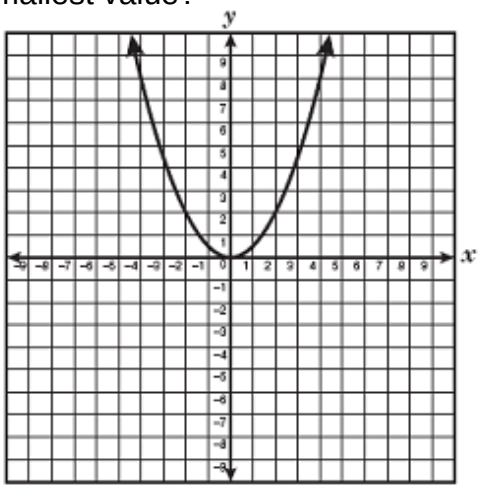
G $15x^5y^5$

H $50x^5y^4$

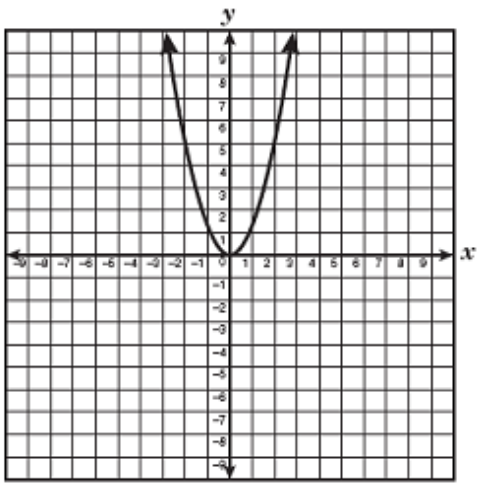
J $50x^5y^5$

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

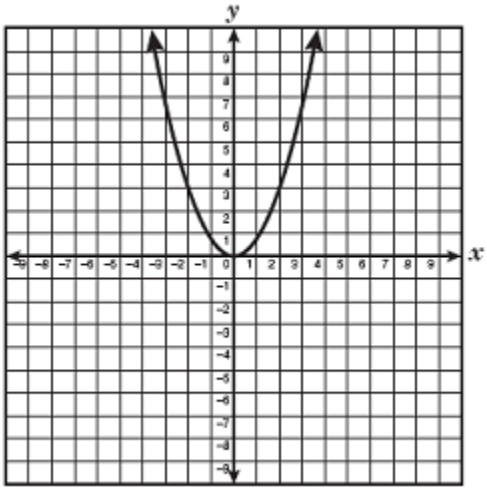
F



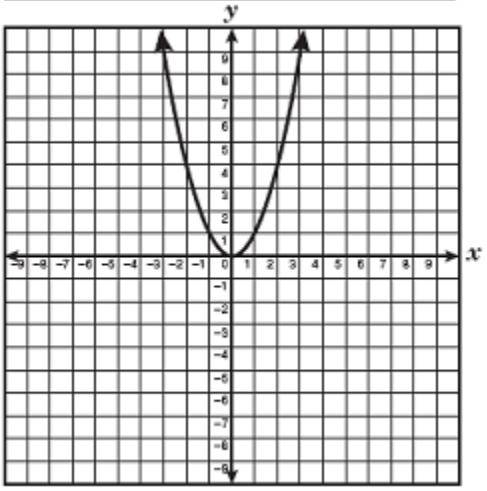
H



G



J



5. Marlena was asked to find an expression that is not equivalent to 2^{12}. Which of the following is not equivalent to the given expression?

F $(2^2)^6$

G $(2^8)^4$

H $(2^6)(2^6)$

J $(2^3)(2^9)$

6. What are the roots of the quadratic equation $x^2 - 3x + 2 = 0$?

A -2 and -1

B -2 and 1

C 2 and -1

D 2 and 1

7. Which expression is equivalent to $\frac{27x^{-2}y^{6}}{3x^{5}y^{2}z^{0}}$?

A $\frac{9x^{7}y^{4}}{z}$

B $\frac{y^{4}}{9x^{3}}$

C $\frac{9y^{4}}{x^{7}}$

D $\frac{9y^{4}}{x^{7}z}$

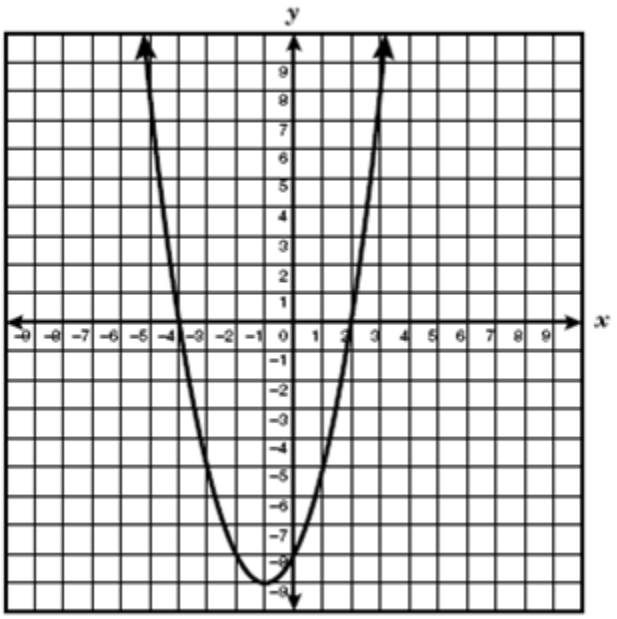
8. What are the roots of the function shown?

F $(-1, -9)$ and $(0, -8)$

G $(0, -4)$ and $(2, 0)$

H $(-4, 0)$ and $(2, 0)$

J $(0, 2)$ and $(0, -4)$



9. Which ordered pair represents one of the roots of the function $f(x) = 2x^2 + 3x - 20$?

F $\left(-\frac{5}{2}, 0\right)$

G $(-4, 0)$

H $(-5, 0)$

J $(-20, 0)$

10. What is the vertex of the quadratic function $f(x) = 4x^2 + 16x + 7$?

F (-2, -9)

G (-0.5, 0)

H (0, 7)

J (-0.5, -3.5)

11. How would the graph of the function $y = x^2 + 4$ be affected if the function were changed to $y = x^2 + 1$?

F The graph would shift 3 units up.

G The graph would shift 3 units down.

H The graph would shift 3 units right.

J The graph would shift 3 units left.

12. In the graph of the function $y = x^2 + 5$, which describes the shift in the vertex of the parabola if, in the function, 5 is changed to -2?

A 3 units up

B 7 units up

C 3 units down

D 7 units down

13. How do the graphs of the functions $f(x) = x^2 + 9$ and $g(x) = x^2 – 11$ relate to each other?

F The graph of *f(x)* is 2 units above the graph of *g(x)*.

G The graph of *f(x)* is 20 units above the graph of *g(x)*.

H The graph of *f(x)* is 2 units to the right the graph of *g(x)*.

J The graph of *f(x)* is 20 units to the right the graph of *g(x)*.