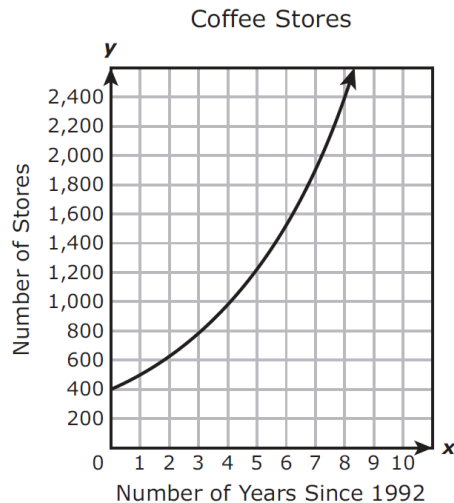


Spiraling Practice

The number of stores opened by a coffee company can be modeled by the exponential function graphed on the grid, where x is the number of years since 1992.



Based on the graph, which statement does **not** appear to be true?

- F** The coffee company had opened 400 stores by the end of 1992.
- G** The coffee company opened 100 stores in one year.
- H** Every year the number of stores the coffee company opened increased by 25%.
- J** Since 1992 the coffee company has opened 250 stores each year.

Simplify.

$$(6x^3)^2(x^{16})^{\frac{1}{4}}$$

$$(3x^5y^2)(7x^{-4}y^8)$$

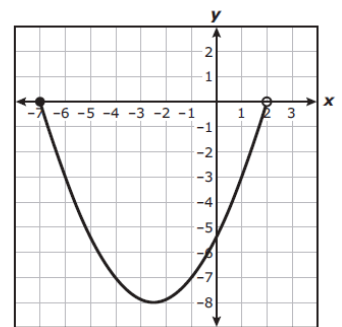
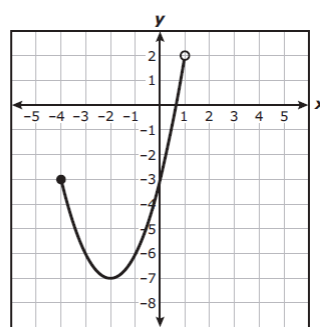
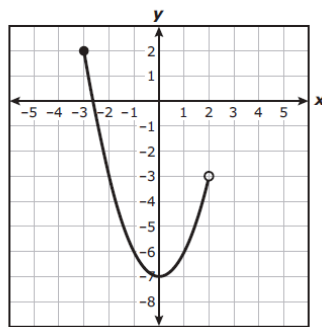
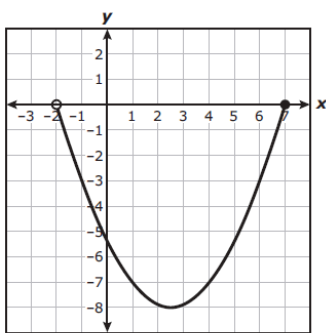
$$\frac{10xy^{-2}k^8}{2x^6y^{-5}k^3}$$

For what values of x is $X = x^{\frac{1}{2}}$? **Explain.**

Using any number between 1 and 9, fill in the boxes to create a true statement. You may only use a number once.

$$(x)^{\square} \cdot (x)^{\left(\frac{\square}{\square}\right)} = \frac{x^{\square}}{x^{\square}}$$

Which graph represents a function with a domain of all real numbers greater than or equal to -7 and less than 2?



A bag contains 18 coins consisting of quarters and dimes. The total value of the coins is \$2.85. Which system of equations can be used to determine the number of quarters, q , and the number of dimes, d , in the bag?

F $0.10q + 0.25d = 2.85$
 $q + d = 18$

G $0.10q + 0.25d = 18$
 $q + d = 2.85$

H $0.25q + 0.10d = 2.85$
 $q + d = 18$

J $0.25q + 0.10d = 18$
 $q + d = 2.85$

If $3r = 18$, what is the value of $6r + 3$?

- A) 6
- B) 27
- C) 36
- D) 39

Given $f = cd^3$, $f = 450$, and $d = 10$, what is c ?

- F. 0.45
- G. 4.5
- H. 15
- J. 45
- K. 150