

Name _____

3-6 Lesson Master

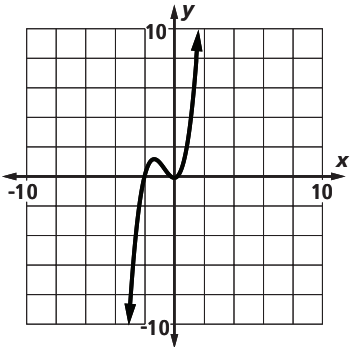
Questions on SPUR Objectives
See Student Edition pages 216–219 for objectives.

REPRESENTATIONS Objective M

In 1–5, give an equation for the graph of $y = 2x^2 - 3$ under the given transformation.

1. $T_{-1,4}$ _____
2. $S_{2,3}$ _____
3. $S_{\frac{1}{4}, -2}$ _____
4. $T_{2.5,5}$ _____
5. $T: (x, y) \rightarrow (x - 1, 15y + 4)$ _____

6. At the right is the graph of $y = g(x)$. On the same axes, sketch the graph of



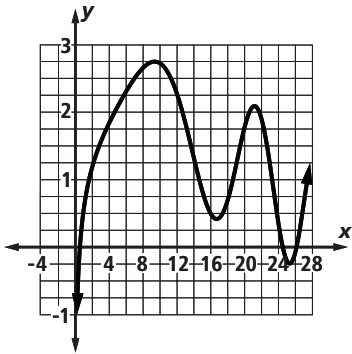
- a. $y = g(x - 1) + 4$.
- b. $\frac{y}{2} = g\left(\frac{x}{3}\right)$.
7. Explain how the zeros of the given function can be estimated from the graph of $q(x) = x^4 + 9x + 2$.

- a. p with $p(x) = (x + 17)^4 + 9(x + 17) + 2$

- b. h with equation $h(x) = 16x^4 + 18x + 2$

- c. $m: x \rightarrow (2x + 17)^4 + 9(2x + 17) + 2$

8. At the right is the graph of the function f , where $f(x) = \sin(x^2) + \ln(2x) - \frac{1}{8}x$.



- a. Use the graph to estimate three zeros of f .

- b. Use your answer to Part a to estimate three zeros of $h: x \rightarrow \sin(3x - 4)^2 + \ln(2(3x - 4)) - \frac{1}{8}(3x - 4)$.

9. Explain how the graph of $y = 3(x + 3)^2$ is related to the graph of the squaring function.

10. Explain how the graph of $\frac{y}{3} = |2x|$ is related to the graph of the absolute value function.

