

Name _____

3-9 Lesson Master

Questions on SPUR Objectives

See Student Edition pages 216–219 for objectives.

SKILLS Objective E

In 1–3, solve the inequalities algebraically.

1. $(2y - 3)(3y + 4) < 0$ _____ 2. $3x^2 + x + 2 > 12x + 6$ _____

3. a. $6^{2p+1} \geq 6^{9p}$ _____ b. $6^{2p+1} > 6^{9p}$ _____ c. $6^{2p+1} < 6^{9p}$ _____

In 4–7, solve the inequalities by using the Test-Point Method.

4. $2z^2 \ln(z + 3) < 4z \ln(z + 3)$ _____ 5. $(2n + 3)(n - 7)(8n + 5) \geq 0$ _____

6. $\frac{t + 2}{(t - 1)(3t - 1)} > 0$ _____ 7. $\frac{x^2 - 4}{x(x - 6)} < 0$ _____

In 8–11, solve the inequality and graph the solution set on the number line provided.

8. $4q^2 - 6 < -2q^2 - 14q + 6$ _____ 

9. $3^{2x^2 + x} > 3^{x^2 + 10x}$ _____ 

10. $\frac{2p^2 + p}{(p - 1)(p + 4)} < 0$ _____ 

11. $w^2 \log w \geq 16 \log w$ _____ 

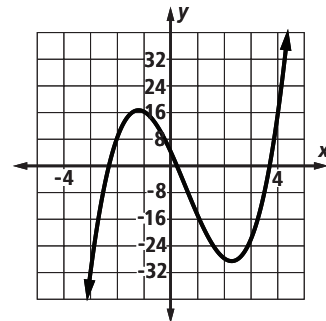
REPRESENTATIONS Objective M

12. A graph of the function g is shown at the right.

Use it to estimate the solutions to

a. $g(x) > 0$ for $-4 \leq x \leq 4$.

b. $g(x) \geq 0$ for $0 \leq x \leq 3$.



13. At the right are graphs of $f(x) = \ln(2x^2)$ and $g(x) = x^2 - 5x + 6$. Use the graph to estimate the solutions to

a. $\ln(2x^2) > x^2 - 5x + 6$.

b. $x^2 - 5x + 6 > \ln(2x^2)$

