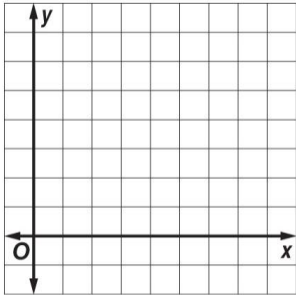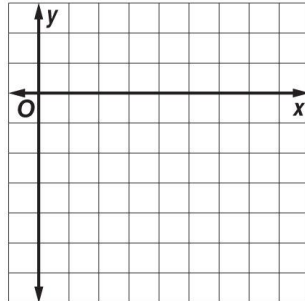# 6-3 Practice
Square Root Functions and Inequalities

Graph each function. State the domain and range.
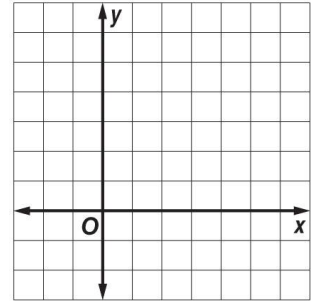
1. $y = \sqrt{5x}$

2. $y = -\sqrt{x-1}$
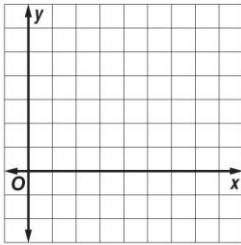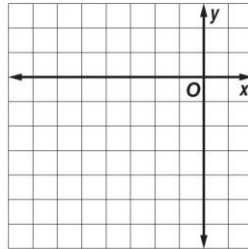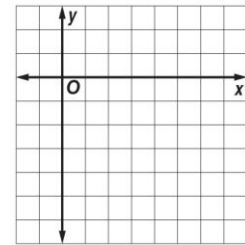
3. $y = 2\sqrt{x+2}$

4. $y = \sqrt{3x-4}$
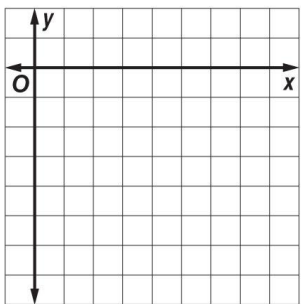
5. $y = \sqrt{x+7} - 4$
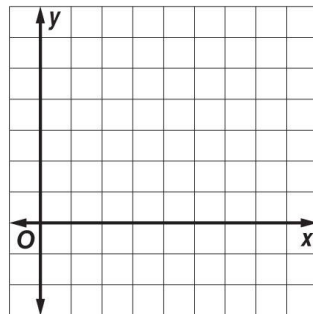
6. $y = 1 - \sqrt{2x+3}$
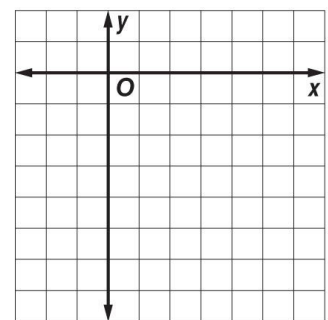
Graph each inequality.

7. $y \geq -\sqrt{6x}$

8. $y \leq \sqrt{x-5} + 4$

9. $y > -2\sqrt{3x+2}$

10. ROLLER COASTERS The velocity of a roller coaster as it moves down a hill is $v = \sqrt{v_0^2 + 64h}$, where v_0 is the initial velocity and h is the vertical drop in feet. If $v = 70$ feet per second and $v_0 = 8$ feet per second, find h.

11. WEIGHT Use the formula $d = \sqrt{\dfrac{3960^2\, W_E}{W_s}} - 3960$, which relates distance from Earth d in miles to weight. If an astronaut's weight on Earth W_E is 148 pounds and in space W_s is 115 pounds, how far from Earth is the astronaut?