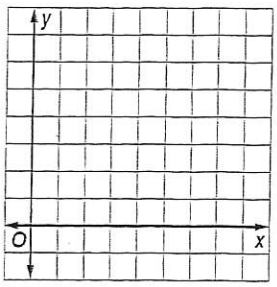
SECONDARY MATH III
RADICAL EQUATIONS/INEQUALITIES
7.3 SQUARE ROOT FUNCTIONS

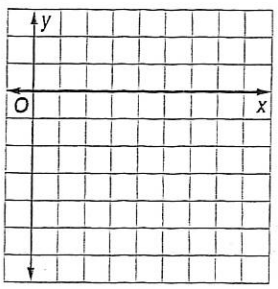
NAME_____
DATE_____
CLASS_____

Graph each function. State the domain and range of each function.

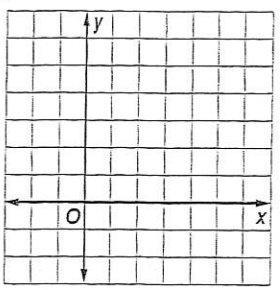
1. $y = \sqrt{5x}$



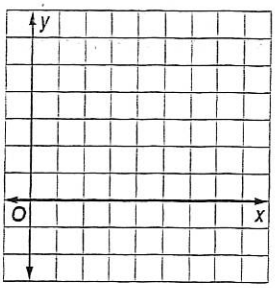
2. $y = -\sqrt{x - 1}$



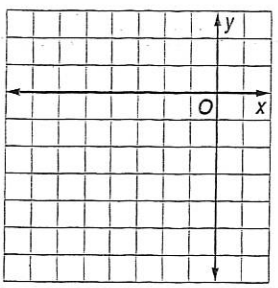
3. $y = 2\sqrt{x + 2}$



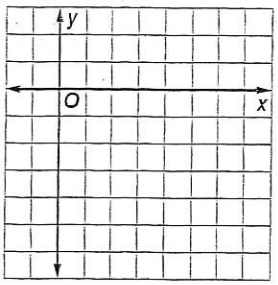
4. $y = \sqrt{3x - 4}$



5. $y = \sqrt{x + 7} - 4$

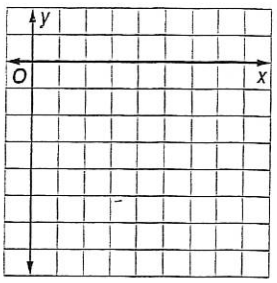


6. $y = 1 - \sqrt{2x + 3}$

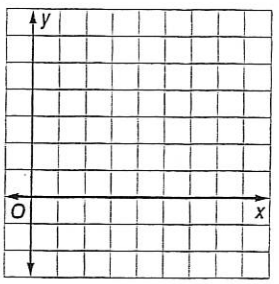


Graph each inequality.

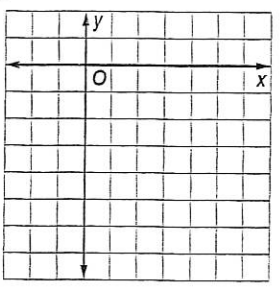
7. $y \geq -\sqrt{6x}$



8. $y \leq \sqrt{x - 5} + 3$



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 $d = \sqrt{\frac{3960^2 W_E}{W_s}} - 3960$, 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?