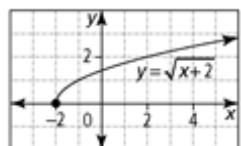


2.1 Extra Practice Sheet

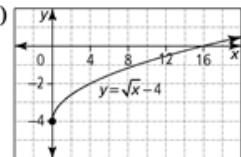
- #1. Domain + Range only
2. Mapping Rule
- 3., 4., 7, 8, 9, 10

BLM 2–2 Section 2.1 Extra Practice

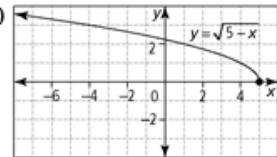
1. a)

domain: $\{x \mid x \geq -2, x \in \mathbb{R}\}$; range: $\{y \mid y \geq 0, y \in \mathbb{R}\}$

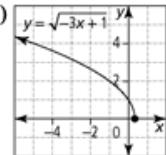
b)

domain: $\{x \mid x \geq 0, x \in \mathbb{R}\}$; range: $\{y \mid y \geq -4, y \in \mathbb{R}\}$

c)

domain: $\{x \mid x \leq 5, x \in \mathbb{R}\}$; range: $\{y \mid y \geq 0, y \in \mathbb{R}\}$

d)

domain: $\{x \mid x \leq \frac{1}{3}, x \in \mathbb{R}\}$; range: $\{y \mid y \geq 0, y \in \mathbb{R}\}$

2. a) vertical stretch by a factor of 3, translation right

5 units; domain: $\{x \mid x \geq 5, x \in \mathbb{R}\}$; range: $\{y \mid y \geq 0, y \in \mathbb{R}\}$

b) vertical reflection in the x-axis, translation up

7 units; domain: $\{x \mid x \geq 0, x \in \mathbb{R}\}$; range: $\{y \mid y \leq 7, y \in \mathbb{R}\}$

c) vertical stretch by a factor of 0.25, horizontal

stretch by a factor of 4, translation down 3 units;

domain: $\{x \mid x \geq 0, x \in \mathbb{R}\}$; range: $\{y \mid y \geq -3, y \in \mathbb{R}\}$

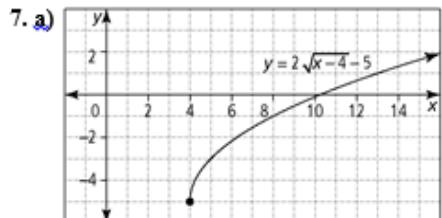
d) horizontal reflection in the y-axis, translation left

1 unit, translation down 5 units; domain:

 $\{x \mid x \leq -1, x \in \mathbb{R}\}$; range: $\{y \mid y \geq -5, y \in \mathbb{R}\}$

3. a) D b) A c) C d) B

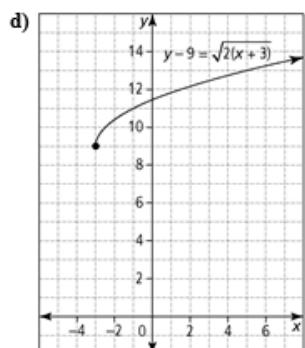
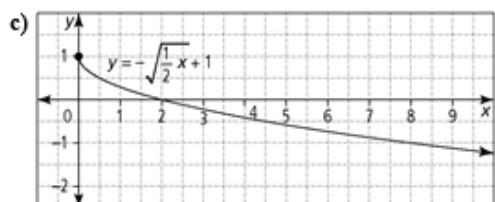
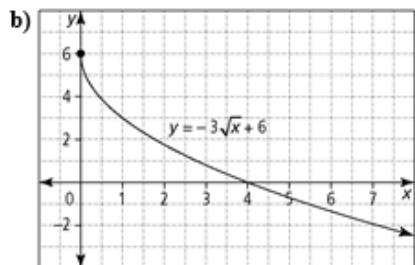
4. a) $y = 3\sqrt{0.5x}$ b) $y = \sqrt{-(x+2)} + 3$
 c) $y = -\sqrt{3x} - 7$ d) $y = 5\sqrt{4(x-6)}$



tion down

1 in the
p 8 units
tion right

tion



8. a) domain: $\{x \mid x \leq 0, x \in \mathbb{R}\}$; range:
 $\{y \mid y \geq -4, y \in \mathbb{R}\}$ b) domain: $\{x \mid x \geq 4, x \in \mathbb{R}\}$;
 range: $\{y \mid y \geq 0, y \in \mathbb{R}\}$ c) domain:

$\{x \mid x \geq 4, x \in \mathbb{R}\}$; range: $\{y \mid y \leq 4, y \in \mathbb{R}\}$

d) domain: $\{x \mid x \geq 0, x \in \mathbb{R}\}$; range:

$\{y \mid y \leq 0, y \in \mathbb{R}\}$

9. a) $y = 2\sqrt{x-7} + 3$ b) $y = 2\sqrt{-(x-3)}$

c) $y = \sqrt{0.5(x+5)}$

10. a) reflection in the y-axis, translation left 7 units

b) horizontal stretch by a factor of $\frac{1}{2}$, translation

right 3 units, translation up 5 units

c) reflection in the y-axis, translation right 5 units,
 translation up 7 units