

Graphing Square Root Functions Exit Quiz

1. Based on your knowledge of parameter changes, describe a , h , and k in $y = a\sqrt{x - h} + k$.

a -

h -

k -

2. How would each of the following graphs change in relation to the parent graph?

a.) $y = \sqrt{x} - 14$

b.) $y = \sqrt{x + 9} + 5$

c.) $y = \sqrt{x - 6} - 1$

3. Identify domain and range $y = \sqrt{x - 2} + 2$

a.) $D: [2, \infty]$ $R: [-2, \infty]$

b.) $D: [2, \infty]$ $R: [2, \infty]$

c.) $D: [-2, \infty]$ $R: [0, \infty]$

4. Identify function with domain and range $D: [-12, \infty]$ $R: [12, \infty]$

a.) $y = \sqrt{x} + 12$

b.) $y = \sqrt{x + 12} + 12$

c.) $y = \sqrt{x + 1} - 12$

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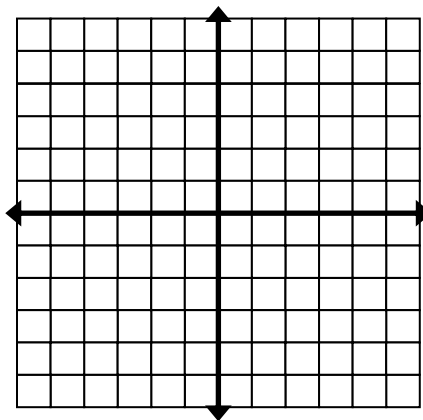
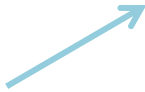
5. Graph $f(x) = \sqrt{x-2}$ and $g(x) = \sqrt{x+2}$

$$f(x) = \sqrt{x-2}$$

$$g(x) = \sqrt{x+2}$$

| x | y |
|---|---|
| | |
| | |
| | |
| | |
| | |

| x | y |
|---|---|
| | |
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Graphing Square Root Functions Exit Quiz

ANSWERS

1. Based on your knowledge of parameter changes, describe a , h , and k in $y = a\sqrt{x-h} + k$.

a - vertical stretch or compression $a < 0$ reflection across the x-axis

h - Horizontal Translation $(x - h)$: h units to the R $(x + h)$: h units to the L

k - Vertical Translation $+k$: k units up $-k$: k units down

2. How would each of the following graphs change in relation to the parent graph?

a.) $y = \sqrt{x} - 14$ The parent function $f(x) = \sqrt{x}$ translates 14 units down

b.) $y = \sqrt{x+9} + 5$ The parent function $f(x) = \sqrt{x}$ translates 9 units left, and 5 units up

c.) $y = \sqrt{x-6} - 1$ The parent function $f(x) = \sqrt{x}$ translates 6 units right, and 1 unit down

3. Identify domain and range $y = \sqrt{x-2} + 2$

a.) D: $[2, \infty]$ R: $[-2, \infty]$

b.) D: $[2, \infty]$ R: $[2, \infty]$

c.) D: $[-2, \infty]$ R: $[0, \infty]$

4. Identify function with domain and range D: $[-12, \infty]$ R: $[12, \infty]$

a.) $y = \sqrt{x} + 12$

b.) $y = \sqrt{x+12} + 12$

c.) $y = \sqrt{x+1} - 12$

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5. Graph $f(x) = \sqrt{x-2}$ and $g(x) = \sqrt{x+2}$

$$f(x) = \sqrt{x-2}$$

$$g(x) = \sqrt{x+2}$$

| x | y |
|---|------|
| 2 | 0 |
| 3 | 1 |
| 4 | 1.41 |
| 6 | 2 |

| x | y |
|----|---|
| -2 | 0 |
| -1 | 1 |
| 2 | 0 |
| 7 | 3 |

