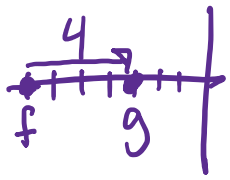
Describe how to obtain the graph of g(x) from the graph of f(x).

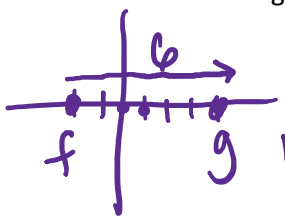
1. g(x) = $\sqrt{x+3}$; f(x) = $\sqrt{x+7}$



left 3 left 7

move the graph right 4 to go from f(x) to g(x)

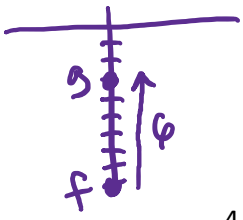
2. g(x) = $\sqrt{x-4}$; f(x) = $\sqrt{x+2}$



right 4 left 2

move the graph right 6 to go from f(x) to g(x)

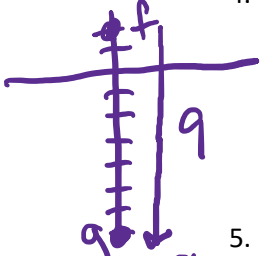
3. g(x) = $\sqrt{x}-3$; f(x) = $\sqrt{x}-9$



down 3 down 9

move the graph up 6 to go from f(x) to g(x)

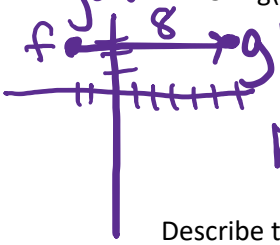
4. g(x) = $\sqrt{x}-7$; f(x) = $\sqrt{x}+2$



down 7 up 2

move the graph up 9 to go from f(x) to g(x)

5. g(x) = $\sqrt{x-6}+3$; f(x) = $\sqrt{x+2}+3$



right 6, up 3 left 2, up 3

move the graph right 8 to go from f(x) to g(x)

Describe the transformation from the parent function.

6. y = $3\sqrt{x}-5$
   - down 5
   - stretch by 3

7. y = $\sqrt{x-2}+4$
   - right 2
   - up 4

8. y = $\frac{2}{3}\sqrt{x+1}$
   - left 1
   - compress by 2/3

9. $y = -\sqrt{x} - 7$

- reflect x-axis
- down 7

10. $y = -2\sqrt{x-3} + 5$

- reflect x
- stretch by 2
- right 3
- up 5