

**Write the original problem and then solve. Check for extraneous solutions.**

6.	9.
12.	14.
16.	18.
28.	36.
46.	48.
50.	

51.

53.

65.

66.

67.

68.

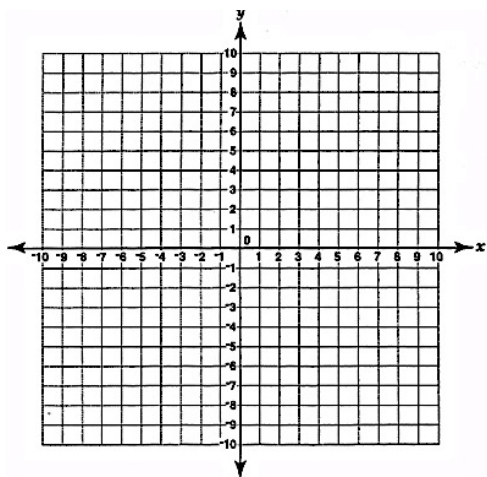
**Application.**

1. The formula  $t = 2\pi\sqrt{\frac{l}{32}}$  represents the swing of a pendulum where  $t$  is the time in seconds to swing back and forth, and  $l$  is the length of the pendulum. What is the length of the pendulum if the pendulum takes 2.5 seconds for one swing? Use 3.14 for  $\pi$

2. The speed that a tsunami (tidal wave) can travel is modeled by the equation  $r = 356\sqrt{d}$ . Where  $r$  is the speed in kilometers per hour and  $d$  is the average depth of the water in kilometers. A tsunami is found to be traveling at 120 km/hr. What is the average depth of the water?

**Graph the function. Describe the domain and the range. Describe the transformation(s).**

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

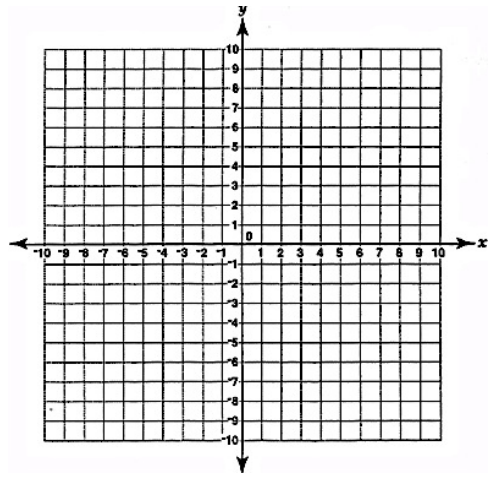


Domain:

Range:

Transformation(s):

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



Domain:

Range:

Transformation(s):