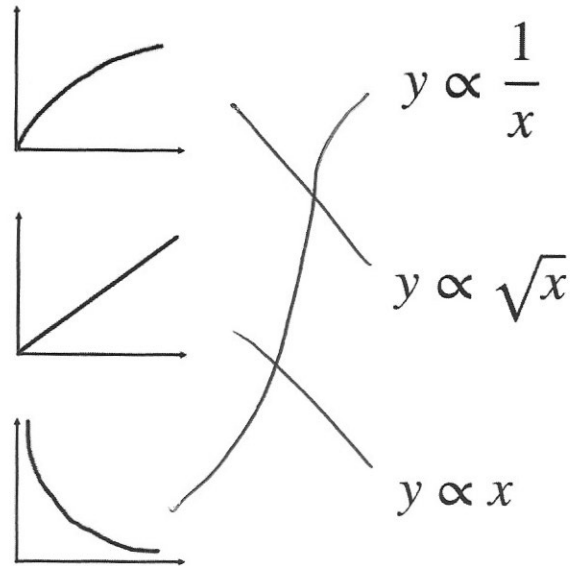




Match each graph to the correct relationship.



Simplify fully

$$\sqrt{275} \quad \sqrt{25} \times \sqrt{11}$$

$$5\sqrt{11}$$

Write  $18\cos 30^\circ + 2\tan 60^\circ$  in the form  $a\sqrt{b}$

$$18 \left( \frac{\sqrt{3}}{2} \right) + 2\sqrt{3}$$

$$9\sqrt{3} + 2\sqrt{3}$$

$$11\sqrt{3}$$

The population of an island is decreasing exponentially.

Osian has begun to monitor the population each year.

Year 6 - Population 3000

Year 8 - Population 2000

What was the population in Year 2?

$$3000 \xrightarrow{xy} \xrightarrow{xy} 2000$$

$$y^2 = \frac{2}{3} \quad y = 0.8164\dots$$

$$3000 \div 0.8164\dots^4 = 6750$$

The area of a circle is  $400\text{cm}^2$  to 1 significant figure.  $350\text{cm}^2$

Work out the lower bound for the circumference of the circle

$$\pi r^2 = 350$$

$$r = 10.555\dots$$

$$d = 21.11\dots$$

$$C = 66.319\text{ cm}$$