

Square Roots

1. Find the positive value of x that makes each equation true. Check your solution.

a) $x^2 = 169$

b) $625 = x^2$

c) $x^2 = 64$

2. A square-shaped park has an area of 324 yd^2 . What are the dimensions of the park? Write and solve an equation.

Square Roots

1. Find the positive value of x that makes each equation true. Check your solution.

a) $x^2 = 169$

$$\begin{aligned}x^2 &= 169 \\ \sqrt{x^2} &= \sqrt{169} \\ x &= \sqrt{169} \\ x &= 13\end{aligned}$$

Check:

$$\begin{aligned}13^2 &= 169 \\ 169 &= 169\end{aligned}$$

b) $625 = x^2$

$$\begin{aligned}625 &= x^2 \\ \sqrt{625} &= \sqrt{x^2} \\ \sqrt{625} &= x \\ 25 &= x\end{aligned}$$

Check:

$$\begin{aligned}625 &= 25^2 \\ 625 &= 625\end{aligned}$$

c) $x^2 = 64$

$$\begin{aligned}x^2 &= 64 \\ \sqrt{x^2} &= \sqrt{64} \\ x &= \sqrt{64} \\ x &= 8\end{aligned}$$

Check:

$$\begin{aligned}8^2 &= 64 \\ 64 &= 64\end{aligned}$$

2. A square-shaped park has an area of 324 yd^2 . What are the dimensions of the park? Write and solve an equation.

$$\begin{aligned}x^2 &= 324 \\ \sqrt{x^2} &= \sqrt{324} \\ x &= \sqrt{324} \\ x &= 18\end{aligned}$$

Check:

$$\begin{aligned}18^2 &= 324 \\ 324 &= 324\end{aligned}$$

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