

9.1 Square Root

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Squaring \rightarrow to Multiply by itself
 $4^2 = 4 \cdot 4 = \underline{\underline{16}}$

What is the opposite (Inverse) of Squaring? **Square Root**

If $a^2 = b$ Then $\sqrt{b} = a$

Square Roots
A.K.A.

Radicals :

$\sqrt{25}$ → Radical Sign
→ Radicand

$$\sqrt{36} = \underline{\underline{6}}$$

What # times itself
equals the Radicand

$$-\sqrt{36} = \underline{\underline{-6}}$$

$$\pm\sqrt{36} = \underline{\underline{\pm 6}}$$

↙ Plus/Minus Sign

of Square Roots:

If the Radicand
is . . .

$$\begin{aligned}3^2 &= 9 \Rightarrow \sqrt{9} = 3 \\(-3)^2 &= 9 \Rightarrow \sqrt{9} = -3 \\ \sqrt{9} &= 3 \text{ or } -3 = \underline{\underline{\pm 3}}\end{aligned}$$

Positive \longrightarrow Two Answers

Negative \longrightarrow No Answers

Zero \longrightarrow 1 Answer

$$\sqrt{81} = \underline{\underline{9}}$$

$$\pm \sqrt{49} = \begin{matrix} + \\ - \end{matrix} \underline{\underline{7}}$$

$$- \sqrt{225} = \underline{\underline{-15}}$$

Evaluate:

$$\sqrt{b^2 - 4ac}$$

$$\begin{aligned} a &= 1 \\ b &= -2 \\ c &= -3 \end{aligned}$$

$$= \sqrt{(-2)^2 - 4(1)(-3)}$$

$$= \sqrt{4 + 12}$$

$$= \sqrt{16} = \underline{\underline{4}}$$

$$-\sqrt{49} = \underline{\underline{-7}}$$

$$\underline{\underline{\sqrt{5} \approx 2.24}}$$

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√(5) 2.236067977
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6 > 5

So...

O.T.L.

① pg 502-503

16-64 every other even

ie: 16, 20, 24, 28, ...