

Square Root of a Decimal

Decimal	Fraction	Square Root
A. 0.49	$\frac{49}{100}$	$\sqrt{\frac{49}{100}} = \frac{7}{10}$
B. 0.64	$\frac{64}{100}$	$\sqrt{\frac{64}{100}} = \frac{8}{10}$
C. 1.21	$\frac{121}{100}$	$\sqrt{\frac{121}{100}} = \frac{11}{10}$
D. 1.44	$\frac{144}{100}$	$\frac{\sqrt{144}}{\sqrt{100}} = \frac{12}{10}$

What are the equal fractions that will give $\frac{1}{9}$?

asking the same thing

$$\frac{1}{3} \times \frac{1}{3} = \frac{1}{9}$$

b) What is the square root of $\frac{1}{9}$

$$\frac{\sqrt{1}}{\sqrt{9}} = \frac{1}{3}$$

$$\sqrt{\frac{1}{9}} = \frac{1}{3}$$

Which of the following are perfect squares?

A. $\frac{75}{300}$ \leftarrow no
 $\frac{3}{12} = \frac{1}{4}$ \leftarrow no
 Lowest terms \leftarrow $\frac{25}{100}$ \leftarrow 5×5 \leftarrow 10×10 \leftarrow yes
 $\frac{1}{4}$ \leftarrow 1×1 \leftarrow 2×2

B. $\frac{196}{81}$ \leftarrow 14×14 \leftarrow 9×9 \leftarrow yes

Remember to convert to fractions first!

C. 0.25 \leftarrow $\frac{25}{100}$ \leftarrow 5×5 \leftarrow 10×10 \leftarrow yes

D. 1.96 \leftarrow $\frac{196}{100}$ \leftarrow 14×14 \leftarrow 10×10 \leftarrow yes

Which of the following are perfect squares?

If "no" at first...put in lowest terms then decide!

A. $\frac{40}{200}$

$\frac{4}{20}$

$\frac{1}{5}$

Handwritten notes: $\leftarrow 1 \times 1$, \leftarrow NO (circled)

B. $\frac{36}{50}$

$\frac{18}{25}$

Handwritten notes: $\leftarrow 6 \times 6$, \leftarrow no, \leftarrow no, $\leftarrow 5 \times 5$, \leftarrow NO (circled)

change to a fraction

c) 0.0121

$\frac{121}{10000} \leftarrow 11 \times 11$

$10000 \leftarrow 100 \times 100$

Find the square root of the following: [calculator]

a) $\sqrt{1789.29}$

42.3

b) $\sqrt{533.61}$

23.1

Find the square root. [Use fractions]

$$a) \sqrt{0.16}$$

↓

b)

$$\sqrt{1.69}$$

$$\sqrt{\frac{169}{100}} = \frac{13}{10}$$

$$c) \sqrt{\frac{128}{72}}$$

$$\sqrt{\frac{16}{9}} = \frac{4}{3}$$

Calculate the number whose square root is...

Change to a fraction

a) 5

$$\sqrt{?} = 5$$
$$? = 25$$

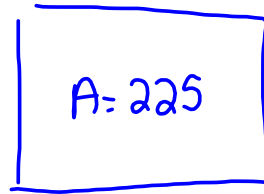
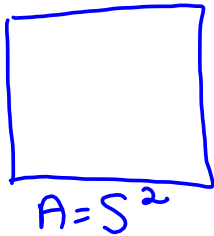
b) $\frac{1}{4}$

$$\sqrt{?} = \frac{1}{4} \times \frac{1}{4}$$
$$\frac{1}{16}$$

c) 0.15

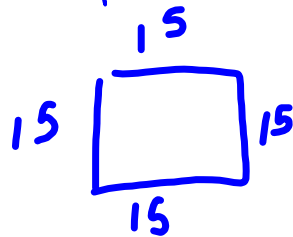
$$\sqrt{?} = \frac{15}{100} \times \frac{15}{100}$$
$$\frac{225}{10000}$$

1) If the area of a square is 225m^2 find the length of the side



$$\begin{aligned} \text{Side length} &= \sqrt{\text{Area}} \\ \text{S.L.} &= \sqrt{225} \\ \text{S.L.} &= 15 \end{aligned}$$

2) What is the perimeter of the square?



$$\left. \begin{aligned} P &= S_1 + S_2 + S_3 + S_4 \\ &= 15 + 15 + 15 + 15 \end{aligned} \right\} \begin{aligned} P &= 4S \\ P &= 4(15) \\ P &= 60\text{m} \end{aligned}$$

Page 11...5, 7, 8, 9

Answers
Pg 468

5. all [a, b, c, d must be fractions]
7. all [f, g, h, i, j must be fractions]
8. all [a, b, c, d, i, k must be fractions]
9. all [a, b, c, d must be in fractions]