

Perfect Squares and Square Roots

1. Find the perfect square for each of the following. Leave as exact value as fraction in lowest terms.

a) 11

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

c) 3.5

d) $\frac{2}{9}$

e) 1.25

f) 3.75

g) 23

h) $\frac{3+7}{4 \div 2}$

2. Find the square root for each of the following.

a) $\sqrt{169}$

b) $-\sqrt{225}$

c) $\sqrt{-289}$

d) $\sqrt{\frac{1}{9}}$

e) $\sqrt{16+9}$

f) $\sqrt{16}+\sqrt{9}$

3. Find the square root for each of the following.

a) $\sqrt{0}$

b) $\sqrt{-6.25}$

c) $\sqrt{0.0081}$

d) $\sqrt{\frac{4}{25}}$

e) $\sqrt{25-36}$

f) $\sqrt{25}-\sqrt{36}$

g) $\sqrt{0.04}+\sqrt{0.09}$

4. Between what two integers does the square root of this number fall?

a) $\sqrt{60}$

b) $\sqrt{75}$

c) $\sqrt{160}$

d) $\sqrt{204}$

e) $\sqrt{300}$

f) $\sqrt{500}$

5. Without using a calculator determine the square roots of the following irrational numbers to one decimal place.

a) $\sqrt{60}$

b) $\sqrt{75}$

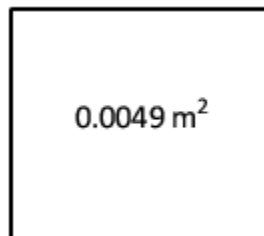
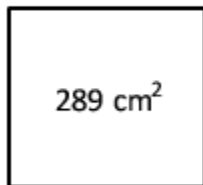
c) $\sqrt{160}$

d) $\sqrt{204}$

e) $\sqrt{300}$

f) $\sqrt{500}$

6. Determine the length of each side of the following squares.



7. A square piece of land has a total area of 3.61 miles, what is the perimeter?

Answers

1a) 121 1b) $\frac{1}{16}$ 1c) $\frac{49}{4}$ 1d) $\frac{4}{81}$

1e) $\frac{25}{16}$ 1f) $\frac{225}{16}$ 1g) 529 1h) 25

2a) 13 2b) -15 2c) none

2d) $\frac{1}{3}$ 2e) 5 2f) 7

3a) 0 3b) none 3c) 0.09 3d) $\frac{2}{5}$

3e) none 3f) -1 3g) 0.5

4a) between 7 and 8

4b) between 8 and 9

4c) between 12 and 13

4d) between 14 and 15

4e) between 17 and 18

4f) between 22 and 23

5a) 7.7 5b) 8.6 5c) 12.6

5d) 14.3 5e) 17.3 5f) 22.4

6a) 17 cm

6b) 0.07m

7) 7.6 miles