Square Root Notes

A square root of a number is one of its two equal factors, which means if $x^2 = y$, then x is the square root of y.

Every positive number has both a positive and negative square root.

A radical symbol $\sqrt{}$ is used to indicate a square root.

The opposite of squaring a number is finding the square root.

Perfect squares are the squares of integers. Below is the list of the first 15 perfect squares.

1	$\sqrt{1} = 1$	36	$\sqrt{36} = 6$	121	$\sqrt{121} = 11$
4	$\sqrt{4} = 2$	49	$\sqrt{49} = 7$	144	$\sqrt{144} = 12$
9	$\sqrt{9} = 3$	64	$\sqrt{64} = 8$	169	$\sqrt{169} = 13$
16	$\sqrt{16} = 4$	81	$\sqrt{81} = 9$	196	$\sqrt{196} = 14$
25	$\sqrt{25} = 5$	100	$\sqrt{100} = 10$	225	$\sqrt{225} = 15$

Find each square root.

1) $\sqrt{64}$ ± 8

2) $-\sqrt{121}$

    -11

3) $\pm\sqrt{256}$ ± 16

4) $\sqrt{-9}$

    not possible

Estimate each square root to the nearest integer.

5) $\sqrt{22}$

± 5

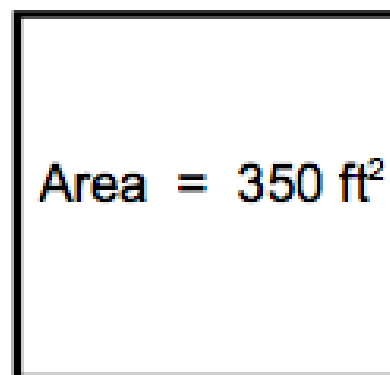Estimate each square root to the nearest integer.

6) $-\sqrt{319}$

-18

Given the area of the square, find the length of the side and then the perimeter of the square.

Round to the nearest tenth.

Area = 350 ft^2

$\sqrt{350}$ = 18.7 ft

x

$$\begin{array}{r} 18.7 \\ \times\ 4 \\ \hline 74.8 \text{ ft} \end{array}$$ is perimeter