Square roots and real numbers

$\sqrt{25}$ is the number you would multiply times _____ to get 25 as an answer.

$\sqrt{25}$ = _____

Numbers like 25, which have whole numbers for their _____, are called _____.

Complete the chart:

Perfect Square	Square root
$1^2 = 1$	$\sqrt{1} = 1$
$2^2 = 4$	$\sqrt{4} = 2$
$3^2 = 9$	$\sqrt{9} = 3$
$4^2 = 16$	$\sqrt{16} = 4$

Every _____ has a square root.

Most numbers are **NOT** _____, so their square roots are not whole numbers.

Most numbers that are not perfect squares have square roots that are _____.

Irrational numbers can be represented by decimals that _____.

The decimal approximations of whole numbers can be determined using a _____.

Find the square roots of the given numbers:

81 _____

37 _____

158 _____

144 _____

100 _____

15 _____

1245 _____

Approximate the value of the following square roots:

$\sqrt{18}$ is between _____ and _____ ≈ _____

$\sqrt{115}$ is between _____ and _____ ≈ _____

$\sqrt{32}$ is between _____ and _____ ≈ _____

$\sqrt{24}$ is between _____ and _____ ≈ _____

$\sqrt{199}$ is between _____ and _____ ≈ _____

Multiplying radicals

The _____ of the square roots of two numbers is the same as

_____

_____

$\sqrt{3} \bullet \sqrt{12} =$

$\sqrt{5} \bullet \sqrt{20} =$

$\sqrt{7} \bullet \sqrt{11} =$

$\sqrt{13} \bullet \sqrt{2} =$

Simplify

$$-\sqrt{4}=$$

$$7\sqrt{64}+9=$$

$$5\sqrt{25}+\sqrt{49}=$$

$$\sqrt{\frac{4}{81}}=$$

$$\sqrt{\frac{1}{36}}-\sqrt{\frac{1}{144}}=$$

Simplified radical form:

No factor inside the radical should be a perfect square:

$$\sqrt{18}=$$

$$\sqrt{108}=$$

$$\sqrt{96}=$$