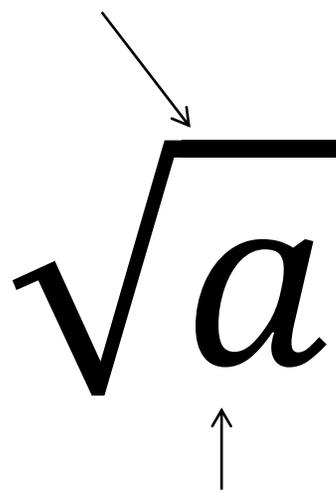


WHAT ARE  
SQUARE  
ROOTS?

EVALUATING  
&  
ESTIMATING  
SQUARE  
ROOTS

SIMPLIFYING  
EXPRESSIONS  
INVOLVING  
SQUARE  
ROOTS

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	



### EXAMPLE 1:

Find the square root of each number.

a)  $\sqrt{144}$

b)  $\sqrt{81}$

c)  $-\sqrt{25}$

### EXAMPLE 2:

Approximate each square root to the nearest hundredth.

a)  $\sqrt{98}$

b)  $-\sqrt{39}$

c)  $\sqrt{55}$

### EXAMPLE 3:

Simplify each expression.

a)  $5(\sqrt{225} - 10)$

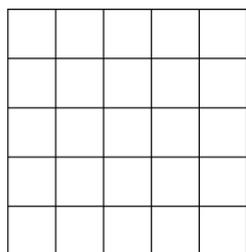
b)  $-125 + 3\sqrt{400}$

c)  $\sqrt{\frac{64}{4}} \cdot \sqrt{9}$

d)  $\sqrt{\frac{25}{16}} + \frac{3}{4}$

The square root of \_\_\_\_\_ is \_\_\_\_\_ because \_\_\_\_\_  $\cdot$  \_\_\_\_\_ = \_\_\_\_\_.

Think:



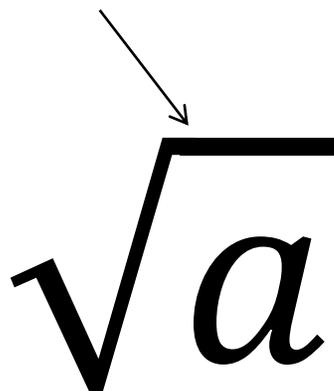
WHAT ARE  
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&  
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SQUARE  
ROOTS

SIMPLIFYING  
EXPRESSIONS  
INVOLVING  
SQUARE  
ROOTS

1	1
2	4
3	9
4	16
5	25
6	36
7	49
8	64
9	81
10	100
11	121
12	144
13	169
14	196
15	225
16	256
17	289
18	324
19	361
20	400

Radical Symbol



Radicand

### EXAMPLE 1:

Find the square root of each number.

a)  $\sqrt{144} = 12$

b)  $\sqrt{81} = 9$

c)  $-\sqrt{25} = -5$

### EXAMPLE 2:

Approximate each square root to the nearest hundredth.

a)  $\sqrt{98} \approx 9.90$

b)  $-\sqrt{39} \approx 6.24$

c)  $\sqrt{55} \approx 7.42$

### EXAMPLE 3:

Simplify each expression.

a)  $5(\sqrt{225} - 10)$

$= 25$

b)  $-125 + 3\sqrt{400}$

$= -65$

c)  $\sqrt{\frac{64}{4}} \cdot \sqrt{9}$

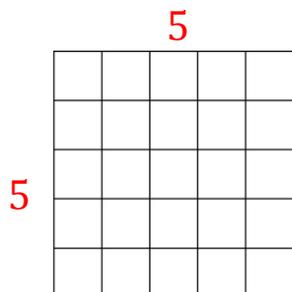
$= 12$

d)  $\sqrt{\frac{25}{16}} + \frac{3}{4}$

$= 2$

The square root of 25 is 5 because 5 · 5 = 25.

Think:



Area =  $5 \cdot 5 = 25$  units<sup>2</sup>

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