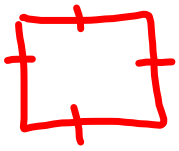
Warm Up
Nov. 2, 2018

Grade 8

1)If the perimeter of a square is 64 m, then what is the length of the side of the square? (Show work)



$\frac{64}{4} = \frac{4 \times side}{4}$

Side = 16

Step further
Area = ?
= L x W
= 16 x 16
= 256

2) Write the factors of 56

1 x 56
2 x 28
4 x 14
7 x 8

1, 2, 4, 7, 8, 14, 28, 56

← 8 factors

3) Write the factors of 64

1 x 64
2 x 32
4 x 16
8 x 8

1, 2, 4, 8, 16, 32, 64

7 factors

64 is a perfect square #

Discuss Factors, have students complete factor sheet 1- 30

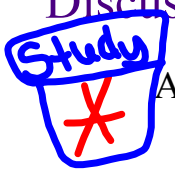
1	1			*	1 factor		odd # of factors for perfect squares	
2	1	2			2 factors			
3	1	3			2 factors			
4	1	2	4	*	3 factors			
5	1	5			2 factors			
6	1	2	3	6	4 factors			
7	1	7			2 factors			
8	1	2	4	8	4 factors			
9	1	3	9	*	3 factors			
10	1	2	5	10				
11	1	11						
12	1	2	3	4	6	12		
13	1	13						
14	1	2	7	14				
15	1	3	5	15				
16	1	2	4	8	16			
17	1	17						
18	1	2	3	6	9	18		
19	1	19						
20	1	2	4	5	10	20		
21	1	3	7	21				
22	1	2	11	22				
23	1	23						
24	1	2	3	4	6	8	12	24
25	1	5	25					
26	1	2	13	26				
27	1	3	9	27				
28	1	2	4	7	14	28		
29	1	29						
30	1	2	3	5	6	10	15	30

Discuss a number having an odd number of factors.

Any number with an odd number of factors will be a perfect square.

Section 1.2
Squares and Square Roots

Discuss a number having an odd number of factors.



Any number with an odd number of factors will be a perfect square.

Ex) A # has 57 factors what do you know about this #? 57 is odd # of factors so the # is perfect

Ex) The factors of 136 are listed below:

1, 2, 4, 8, 17, 34, 68, 136 — 8 factors

Is 136 a square number? How do you know?

136 has an 8 factors (even number) so it is not a perfect square since all perfect squares have an odd number of factors.

1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121, 144, 169, 196, 225

1^2 2^2 3^2

1x1 2x2 3x3

36

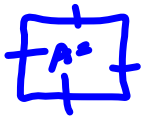
1 x 36
2 x 18
3 x 12
4 x 9
6 x 6

1, 2, 3, 4, 6, 9, 12, 18, 36

9 factors so odd # of factors

(Perfect square)
Square number: a PRODUCT of a number multiplied by itself

25 is a square number since 5x5 =25



area of the square

Square root: a number that when it is multiplied by itself produces a perfect square

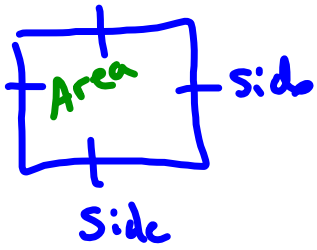
$\sqrt{}$ - This is the symbol for square root.

6 is the square root of 36

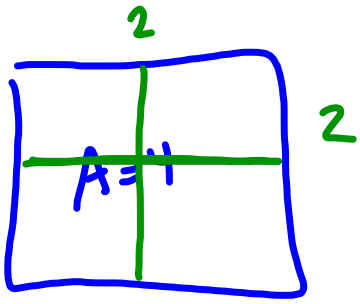
$\sqrt{36} = 6$

side length

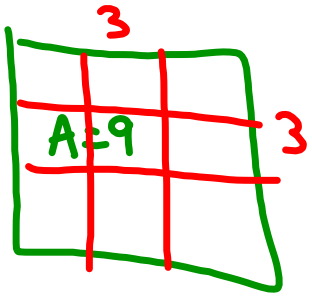
Area of square = $side^2$
= side x side



Side of Square = $\sqrt{(Area)}$



$\sqrt{4} = 2$



$\sqrt{9} = 3$

$\sqrt{64} = 8$

$\sqrt{81} = 9$

$\sqrt{100} = 10$

Class/Homework

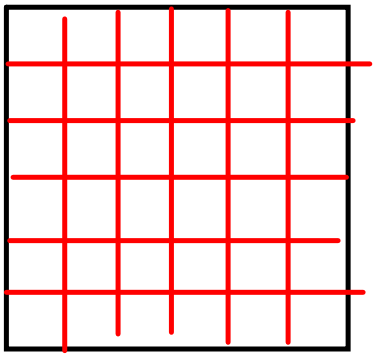
page. 14

1,
6(a,b,c,d),
7(a,b,c,d),
[redacted],
10(a,b,c),
11(a,b),
[redacted],
14,
15

#1) square root and squaring # are inverses (so opposite operation)

"+" is opposite to "−"

"x" is opposite to ÷



pg 15 Square each number

5a) $4^2 = 4 \times 4 = 16$

b a) $8^2 = 8 \times 8$
$= 64$

7. Find square root

a) $\sqrt{25} = 5$

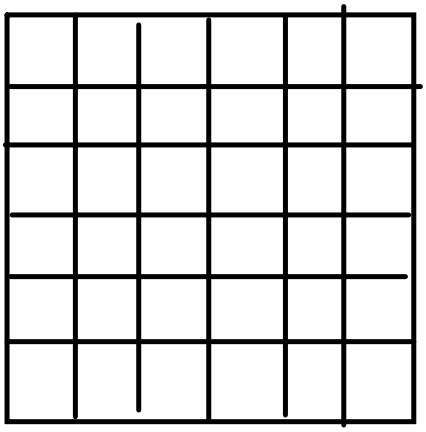
8 Square

a) 1^2
b) 10
c) 100^2
d) 1000^2

9 a) 50

1×50
2×25
5×10

1, 2, 5, 10, 25, 50



400

1 x 400
2 x 200
4 x 100
5 x 80
8 x 50
10 x 40
20 x 20

256

1x256

2x128

4x64

8x32

16x16

1, 2, 4, 8, 16, 32, 64, 128, 256