

Name: \_\_\_\_\_

## SQUARE NUMBERS



A square number is a number that is the result of multiplying an integer by itself.

For example,  $1^2 = 1 \times 1 = 1$ ,  $2^2 = 2 \times 2 = 4$ , and so on.



- The first 6 square numbers are shown above.
- Use this to **complete the table below**, which has been partially filled in to help you get started.

$1^2$	$= 1 \times 1$	$= 1$
$2^2$	$= 2 \times 2$	$= 4$
$3^2$	$= 3 \times 3$	$= 9$
$4^2$	$= 4 \times 4$	$= 16$
$5^2$	$= 5 \times 5$	$= 25$
$6^2$	$= 6 \times 6$	$= 36$
$7^2$	$= 7 \times 7$	$= 49$
$8^2$	$= 8 \times 8$	$= 64$
$9^2$	$= 9 \times 9$	$= 81$
$10^2$	$= 10 \times 10$	$= 100$
$11^2$	$= 11 \times 11$	$= 121$
$12^2$	$= 12 \times 12$	$= 144$

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1. Use = or  $\neq$  to make each number statement correct.

a)  $5^2$   $\neq$   $5 \times 5$

b)  $6^2$   $\neq$  12

 = Equal

c)  $7^2$   $=$  49

d)  $9^2$   $\neq$  91

 = Not Equal

e)  $3^2 + 4^2$   $=$  25

2. **Adding** and **Subtracting** Square Numbers:

a)  $4^2 + 3^2 =$   
 $16 + 9 = 25$

b)  $8^2 - 3^2 =$   
 $64 - 9 = 55$

c)  $11^2 - 6^2 =$   
 $121 - 36 = 85$

d)  $4^2 + 7^2 =$   
 $16 + 49 = 65$

e)  $12^2 - 4^2 =$   
 $144 - 16 = 128$

f)  $5^2 + 11^2 =$   
 $25 + 121 = 146$

g)  $4^2 - 1^2 =$   
 $16 - 1 = 15$

h)  $9^2 + 8^2 =$   
 $81 + 64 = 145$

3. **Multiplying** and **Dividing** Square Numbers:

a)  $3^2 \times 2^2 =$   
 $9 \times 4 = 36$

b)  $6^2 \div 3^2 =$   
 $36 \div 9 = 4$

c)  $4^2 \times 5^2 =$   
 $16 \times 25 = 400$

d)  $8^2 \div 4^2 =$   
 $64 \div 16 = 4$

e)  $7^2 \times 1^2 =$   
 $49 \times 1 = 49$

f)  $10^2 \div 2^2 =$   
 $100 \div 4 = 25$

g)  $3^2 \times 5^2 =$   
 $9 \times 25 = 225$

h)  $12^2 \div 2^2 =$   
 $144 \div 4 = 36$

i)  $5^2 \times 4^2 \div 2^2 =$   
 $25 \times 16 \div 4 = 100$