

A number is 'squared' when it is multiplied by itself. 'X squared' is written as  $x^2$ . The square root of a number is one of two equal factors of that number. It is important to remember that there are TWO answers to every square root (both positive and negative). The symbol for square root is  $\sqrt{x}$ . 'The square root of x' is written as  $\sqrt{x}$ .

1. Write the first 20 square numbers:


2. Write the value for the SQUARE of the following: (round to 2dp)

- a) 24 \_\_\_\_\_      b) 17 \_\_\_\_\_      c) 3.4 \_\_\_\_\_      d) 0.5 \_\_\_\_\_      e)  $3\frac{1}{2}$  \_\_\_\_\_  
 f) 1 \_\_\_\_\_      g) 0 \_\_\_\_\_      h) -3 \_\_\_\_\_      i) -1.2 \_\_\_\_\_      j) 19 \_\_\_\_\_  
 k) -2 \_\_\_\_\_      l) 0.21 \_\_\_\_\_      m)  $6\frac{1}{4}$  \_\_\_\_\_      n) 2.3 \_\_\_\_\_      o) 50 \_\_\_\_\_

3. Write the TWO values for each of the following:

- a)  $\sqrt{121} =$  \_\_\_\_\_      b)  $\sqrt{81} =$  \_\_\_\_\_      c)  $\sqrt{16} =$  \_\_\_\_\_      d)  $\sqrt{9} =$  \_\_\_\_\_      e)  $\sqrt{100} =$  \_\_\_\_\_  
 f)  $\sqrt{64} =$  \_\_\_\_\_      g)  $\sqrt{49} =$  \_\_\_\_\_      h)  $\sqrt{4} =$  \_\_\_\_\_      i)  $\sqrt{25} =$  \_\_\_\_\_      j)  $\sqrt{144} =$  \_\_\_\_\_  
 k)  $\sqrt{324} =$  \_\_\_\_\_      l)  $\sqrt{441} =$  \_\_\_\_\_      m)  $\sqrt{169} =$  \_\_\_\_\_      n)  $\sqrt{36} =$  \_\_\_\_\_      o)  $\sqrt{400} =$  \_\_\_\_\_

4. Write the value for each of the following: (round to 2dp)

- a)  $\sqrt{134} =$  \_\_\_\_\_      b)  $\sqrt{264} =$  \_\_\_\_\_      c)  $\sqrt{562} =$  \_\_\_\_\_      d)  $\sqrt{731} =$  \_\_\_\_\_      e)  $\sqrt{921} =$  \_\_\_\_\_  
 f)  $\sqrt{63} =$  \_\_\_\_\_      g)  $\sqrt{47} =$  \_\_\_\_\_      h)  $\sqrt{5867} =$  \_\_\_\_\_      i)  $\sqrt{64731} =$  \_\_\_\_\_      j)  $\sqrt{877} =$  \_\_\_\_\_  
 k)  $\sqrt{33} =$  \_\_\_\_\_      l)  $\sqrt{1\frac{5}{6}} =$  \_\_\_\_\_      m)  $\sqrt{15.22} =$  \_\_\_\_\_      n)  $\sqrt{\frac{25}{36}} =$  \_\_\_\_\_      o)  $\sqrt{0.31} =$  \_\_\_\_\_

5. What two whole numbers are each of the following answers between (don't use a calculator):

- a)  $\sqrt{124} =$  \_\_\_\_\_      b)  $\sqrt{75} =$  \_\_\_\_\_      c)  $\sqrt{55} =$  \_\_\_\_\_      d)  $\sqrt{84} =$  \_\_\_\_\_      e)  $\sqrt{103} =$  \_\_\_\_\_  
 f)  $\sqrt{8} =$  \_\_\_\_\_      g)  $\sqrt{13} =$  \_\_\_\_\_      h)  $\sqrt{26} =$  \_\_\_\_\_      i)  $\sqrt{38} =$  \_\_\_\_\_      j)  $\sqrt{69} =$  \_\_\_\_\_

6. The following values are the result of square rooting an integer. Write the two square numbers that the original value is between

- a)  $5.196 =$  **25 & 36**      b)  $6.708 =$  \_\_\_\_\_      c)  $3.316 =$  \_\_\_\_\_      d)  $6.164 =$  \_\_\_\_\_      e)  $7.071 =$  \_\_\_\_\_  
 f)  $10.954 =$  \_\_\_\_\_      g)  $8.717 =$  \_\_\_\_\_      h)  $12.369 =$  \_\_\_\_\_      i)  $9.433 =$  \_\_\_\_\_      j)  $1.414 =$  \_\_\_\_\_

7. Complete the table below by finding the square and the square root for the values given (where possible):

$x$	3	-5	9	12	3.5	6.8	0.01	21	45	$2\frac{1}{2}$	$4\frac{1}{4}$	-2	0
$x^2$													
$\sqrt{x}$													

8. Insert the **same number** under each square root sign to get the answer shown:  $\sqrt{\quad} \times \sqrt{\quad} + \sqrt{\quad} = 6$