

Workout

Question 1: Work out each of the following

- (a)  $\sqrt{9}$       (b)  $\sqrt{25}$       (c)  $\sqrt{100}$       (d)  $\sqrt{4}$       (e)  $\sqrt{36}$       (f)  $\sqrt{64}$   
(g)  $\sqrt{16}$       (h)  $\sqrt{81}$       (i)  $\sqrt{144}$       (j)  $\sqrt{121}$       (k)  $\sqrt{1}$       (l)  $\sqrt{0}$

Question 2: Below is a list of numbers.

0      1      4      7      8      9      11      15      20      25      29

From the list write down:

- (a) The square root of 81  
(b) The square root of 225  
(c) The square root of 400  
(d) The square root of 1

Question 3: Work out each of the following  
You may use a calculator

- (a)  $\sqrt{324}$       (b)  $\sqrt{1444}$       (c)  $\sqrt{841}$       (d)  $\sqrt{4225}$       (e)  $\sqrt{21316}$       (f)  $\sqrt{652864}$   
(g)  $\sqrt{29.16}$       (h)  $\sqrt{53.29}$       (i)  $\sqrt{0.16}$       (j)  $\sqrt{216.09}$       (k)  $\sqrt{123.21}$       (l)  $\sqrt{13.1044}$

Question 4: Between which two consecutive integers do each of the following lie between?  
e.g.  $\sqrt{53}$  lies between 7 and 8

- (a)  $\sqrt{20}$       (b)  $\sqrt{97}$       (c)  $\sqrt{6}$       (d)  $\sqrt{41}$       (e)  $\sqrt{130}$       (f)  $\sqrt{250}$

Question 5: Estimate each of the following.  
Give each estimate to 1 decimal place.

- (a)  $\sqrt{56}$       (b)  $\sqrt{10}$       (c)  $\sqrt{95}$       (d)  $\sqrt{63}$       (e)  $\sqrt{150}$       (f)  $\sqrt{86}$

Question 6: Using your calculator, work out the answers to Question 5.

# Square Root

Video 228 on [www.corbettmaths.com](http://www.corbettmaths.com)

## Apply

Question 1: Harriet thinks of a number.  
She squares it and then adds 11.  
Harriet's answer is 36.  
What was her original number?

Question 2: A square has an area of 225cm<sup>2</sup>.  
Work out the perimeter of the square.

Question 3: Place each of the digits in the correct position to make the correct calculation.

1

2

4

8

9

$\sqrt{\square\square\square} = \square\square$

Question 4: Can you spot any mistakes?

Write down the value of

(a)  $\sqrt{16}$  
 $\begin{array}{r} 8 \\ \hline (1) \end{array}$

(b)  $\sqrt{100}$  
 $\begin{array}{r} 50 \\ \hline (1) \end{array}$

Question 5: x is a positive integer.  
Find the value of x.

$$\sqrt{3^2 + 4^2 + 12^2} = \sqrt{3^2 + 4^2} + \sqrt{x^2}$$

Question 6: In 1980 a man's age was the square root of the number of the year of his birth.



- (a) When was he born?
- (b) Did he have to join the forces in the First World War or the Second World War?