SQUARES, CUBES, ROOTS

Task 1

1) Work out the value of 3^2.
   9
2) Work out the value of 5^2.
   25
3) Work out the value of 10^2.
   100
4) Work out the value of $\sqrt{16}$.
   4
5) Work out the value of $\sqrt{49}$.
   7
6) Work out the value of 2^3.
   8
7) Work out the value of 4^3.
   64
8) Work out the value of $\sqrt[3]{27}$.
   3
9) Work out the value of $\sqrt[3]{125}$.
   5
10) Work out the value of 12^2.
    144
11) Work out the value of 5^3.
    125
12) Work out the value of $\sqrt{81}$.
    9
13) Work out the value of $\sqrt[3]{64}$.
    4
14) Work out the value of 15^2.
    225
15) Work out the value of 6^3.
    216
16) Work out the value of $\sqrt{121}$.
    11
17) Work out the value of $\sqrt[3]{1000}$.
    10
18) Work out the value of 20^2.
    400
19) Work out the value of 10^3.
    1000
20) Work out the value of $\sqrt{196}$.
    14

Task 2

21) Write 4 × 4 × 4 as a single power of 4.
    $\mathbf{4^3}$
22) Write 2 × 2 × 2 × 2 × 2 as a single power of 2.
    $\mathbf{2^5}$
23) A list of numbers is shown below.
    5 7 9 11 13 15
    Which of the numbers is a square number?
    9
24) A list of numbers is shown below.
    2 4 6 8 10 12
    Which of the numbers are powers of 2?
    2, 4, 8
25) A square garden has an area of 81 m². What is the length of one side?
    $\sqrt{81} = \mathbf{9\ m}$
26) A cube-shaped box has a volume of 27 cm³. What is the length of one edge?
    $\sqrt[3]{27} = \mathbf{3\ cm}$
27) Jack has 100 square tiles. He wants to arrange them in a square. How many tiles will be on each side?
    $\sqrt{100} = \mathbf{10\ squares}$
28) A square picture frame has sides that are 12 inches long. What is its area?
    $12^2 = \mathbf{144\ in^2}$
29) A square has an area of 36 cm². What is the perimeter of the square?
    $\sqrt{36} = 6$
    $6 \times 4 = \mathbf{24\ cm}$
30) A poster is in the shape of a square and has an area of 225 cm². What is the side length?
    $\sqrt{225} = \mathbf{15\ cm}$
31) The square of a number is 256. What is the number?
    $\sqrt{256} = \mathbf{16}$
32) A square window has a perimeter of 36 inches. What is the area?
    $Each\ side = 36 \div 4 = 9$
    $Area = 9^2 = \mathbf{81\ in^2}$