

Y6 Using a calculator to solve problems using Powers and Roots

A Copy the question, then use  $x^2$  button to work out these

1.  $9^2$
2.  $21^2$
3.  $1.2^2$
4.  $0.2^2$
5.  $3.1^2$
6.  $100^2$
7.  $25^2$
8.  $8.7^2$
9.  $0.9^2$
10.  $81.4^2$

B Copy the question, then use  $x^3$  or  $x^\square$  button to work out these

1.  $6^3$
2.  $2^8$
3.  $3^5$
4.  $10^5$
5.  $4^3$
6.  $0.1^3$
7.  $1.7^4$
8.  $3^4 \times 7$
9.  $5^3 \times 10$

C Copy and use the  $\sqrt{\quad}$  button to work these out, round to 1 d.p.

1.  $\sqrt{10}$
2.  $\sqrt{29}$
3.  $\sqrt{107}$
4.  $\sqrt{19.7}$
5.  $\sqrt{2406}$
6.  $\sqrt{58.6}$
7.  $\sqrt{0.15}$
8.  $\sqrt{0.727}$

D Use the  $\sqrt[3]{\quad}$  button the work out these.

1.  $\sqrt[3]{64}$
2.  $\sqrt[3]{125}$
3.  $\sqrt[3]{1000}$
4. Estimate  $\sqrt{50}$
5. Estimate  $\sqrt{120}$

E Puzzle

1. What is the largest number you can make using four 2's.

2. If  $3^\triangle + 7^\circ = 76$

And  $\triangle \times \circ = \star$

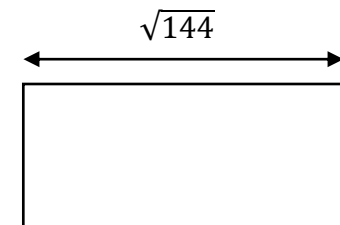
What is the value of  $\star$ ?

F Reasoning

1. Find a cube number which is greater than 100 but less than 200?
2. Mark says that  $6^3$  is 18. Is Mark correct? Explain your answer.
3. Jacob thinks that the difference between two consecutive cube numbers is always odd. Is Jacob correct. Give examples to justify your answer.

G Problem Solving

1. The length of a rectangle is four times its width. Work out its perimeter.



2. Last year my age was a square number, next year it will be a cube number. How old am I? How long must I wait until my age is both a square and cube number?