

1 Write down the value of  $7^2$

$$7^2 = 7 \times 7 = 49$$

49 (1)

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(Total for Question 1 is 1 mark)

2 Work out  $3^2$

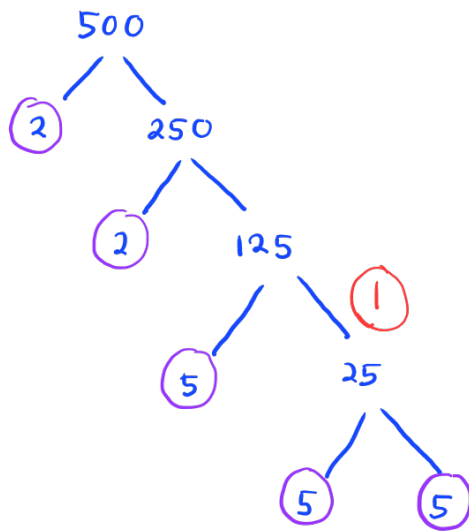
$$3^2 = 3^1 \times 3^1 \\ = 9$$

9 (1)

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(Total for Question 2 is 1 mark)

3 Write 500 as a product of powers of its prime factors.



$$2 \times 2 \times 5 \times 5 \times 5 = 2^2 \times 5^3$$

$$2^2 \times 5^3$$

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(Total for Question 3 is 3 marks)

4 Simplify  $(2 \times 2^8)^2$

Give your answer as a power of 2

$$\begin{aligned} & \left( 2^{(-5+8)} \right)^2 \quad \textcircled{1} \\ & = \left( 2^3 \right)^2 \\ & = 2^{3 \times 2} \\ & = 2^6 \quad \textcircled{1} \end{aligned}$$

multiplication or division of power = + or -

$$2^6$$

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(Total for Question 4 is 2 marks)