

1 (a) Find the value of

(i)  $5^0$ ,

Answer(a)(i) ..... 1 [1]

(ii) the square root of 64,

$$\sqrt{64} = \pm 8$$

Answer(a)(ii) .....  $\pm 8$  [1]

(iii) the cube root of 64,

$$\sqrt[3]{64} = 4$$

Answer(a)(iii) ..... 4 [1]

(iv) the integer closest in value to  $(1.8)^3$ .

$$(1.8)^3 = 5.832 \\ \approx 6$$

Answer(a)(iv) ..... 6 [1]

(b) Write down

(i) a common factor of 15 and 27, which is greater than 1,

$$\begin{array}{r|l} 15 & \\ \hline 1 & 15 \\ 3 & 5 \end{array}$$

$$\begin{array}{r|l} 27 & \\ \hline 1 & 27 \\ 3 & 9 \end{array}$$

Common factors = 1, 3

Answer(b)(i) ..... 3 [1]

(ii) a common multiple of 10 and 12.

Multiple of 10: 10, 20, 30, 40, 50, 60, 70, ...

Multiple of 12: 12, 24, 36, 48, 60, 72, ... Answer(b)(ii) ..... 60 [1]

(c) (i) Two of the factors of 2007 are square numbers. One of these is 1.

Find the other square number.

$$\begin{array}{r|l} 2007 & \\ \hline 1 & 2007 \\ 3 & 669 \\ 9 & 223 \end{array}$$

Answer(c)(i) ..... 9 [1]

(ii) Write down the two factors of 2007 which are prime.

Answer(c)(ii) ..... 3 ..... and ..... 223 ..... [2]