

$$10 \quad t = \frac{2 \cos p^\circ - 1}{\sqrt{q} - r}$$

where $p = 30$, $q = 12\,288$ and $r = 64$

(a) Find the exact value of t .

Give your answer as a decimal.

$$t = \dots\dots\dots (2)$$

(b) Write your answer to part (a) to 4 significant figures.

$$\dots\dots\dots (1)$$

(Total for Question 10 is 3 marks)

$$11 \quad \mathcal{E} = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$$

$$A = \{\text{odd numbers}\}$$

$$B = \{\text{multiples of 3}\}$$

$$C = \{\text{factors of 24}\}$$

List the elements of the set

(a) A'

$$A' = \{\dots\dots\dots\} (1)$$

(b) $B \cup C$

$$B \cup C = \{\dots\dots\dots\} (1)$$

(c) $A' \cap (B \cup C)$

$$A' \cap (B \cup C) = \{\dots\dots\dots\} (1)$$

(Total for Question 11 is 3 marks)

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