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

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

(a) Find the exact value of t.
Give your answer as a decimal.

$t =$ .....

(2)

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

.....

(1)

(Total for Question 10 is 3 marks)

11 $\mathscr{E} = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$
$A = \{\text{odd numbers}\}$
$B = \{\text{multiples of 3}\}$
$C = \{\text{factors of 24}\}$

List the elements of the set

(a) A'

$A' = \{$.....$\}$

(1)

(b) $B \cup C$

$B \cup C = \{$.....$\}$

(1)

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

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

(1)

(Total for Question 11 is 3 marks)