9. For the formula $A = P(1 + rt)$, calculate the value of

(a) (i) A, when $P = 1200$, $r = 0.075$ and $t = 3$, [2]

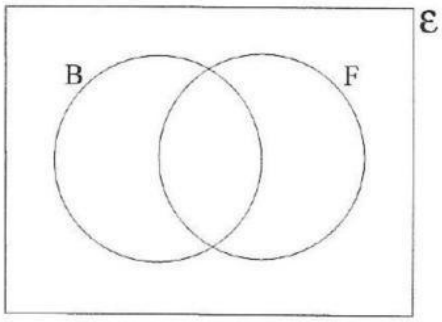
(ii) P, when $A = 2100$, $r = 0.08$ and $t = 5$. [2]

(b) Make t the subject of the formula. [3]

t = ——

9. In a survey of 80 athletes, 45 said that they play basketball (B), 40 play football (F) and 27 play neither game.

(a) Copy and complete the Venn diagram below using the above information.



[4]

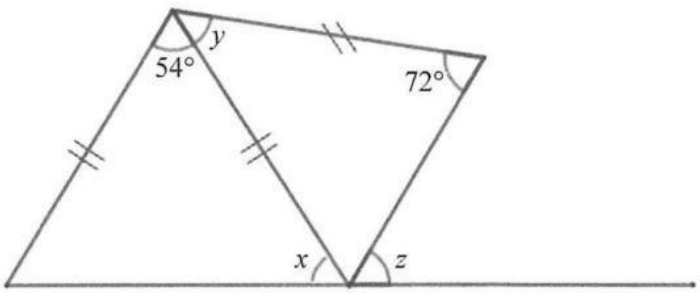
(b) Using your Venn diagram, write down the number of students

(i) that play both sports, [1]

(ii) that play only one of these sports, [1]

(iii) that do not play basketball. [1]

9.



NOT TO SCALE

Using the diagram, calculate the size of angle

(a) x [1]

(b) y [1]

(c) z [1]

9. The formula $d = \frac{(v+u)t}{2}$, is particularly useful in the study of Physics.

Transpose the formula to make v the subject. [3]

v = ——

9. A floor is covered with 16-inch square tiles.

There are $17\frac{1}{2}$ tiles along the width and 19 tiles along the length.

(a) Using 1 inch = 2.54 centimetres, find in centimetres the

(i) width of the floor, [2]

(ii) length of the floor. [2]

(b) Find the area of the floor in square metres. [2]

Width in meters =

Length in meters =

Area in square meters =

9. $C = \frac{5F - 160}{9}$ is used to convert degrees of temperature from Fahrenheit (F) to Celsius (C).

(a) Convert:

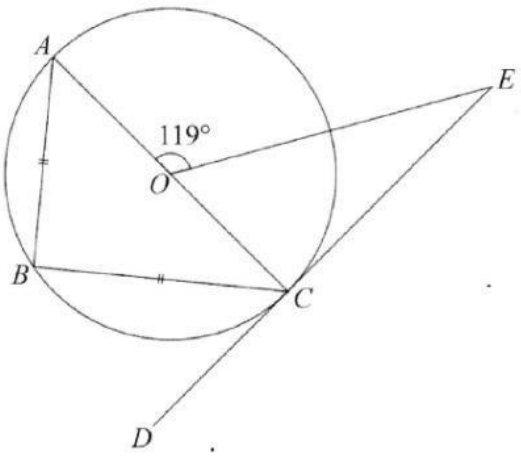
(i) $50\,°F$ to $°C$, [2]

(ii) $50\,°C$ to $°F$ [4]

(b) Make F the subject of the formula. [3]

F = ——

9.



NOT TO SCALE

In the diagram, O is the centre of the circle,
DE is tangent to the circle at C and AC is a diameter.
Find the sizes of the following angles:

(a) $E\hat{O}C$ [1]

(b) $O\hat{C}E$ [1]

(c) $C\hat{E}O$ [1]

(d) $A\hat{B}C$ [1]

(e) $B\hat{C}A$ [1]