

**HIGHER TIER
MINI PRACTICE EXAM 7**



**NON-CALCULATOR
20 MINUTES ALLOWED**

1.
Below is part of a map showing two cities – Normanton (N) and Spendley (S).



Scale: 1cm = 4 km

(a) Measure the three-figure bearing of Spendley from Normanton.

(1)

(b) Targate is located 12 kilometres from Spendley on a bearing of 111° .
Mark Targate on the map.

(2)

2.

(a) List all integers that satisfy the inequality $-3 \leq x < \frac{21}{5}$

(2)

(b) Solve $22 - 3x > 10$

(2)

3.

Simplify fully $\frac{x^2 + 4x - 12}{x^2 - 4}$

(3)

4.

A group of 60 people chose two activities.

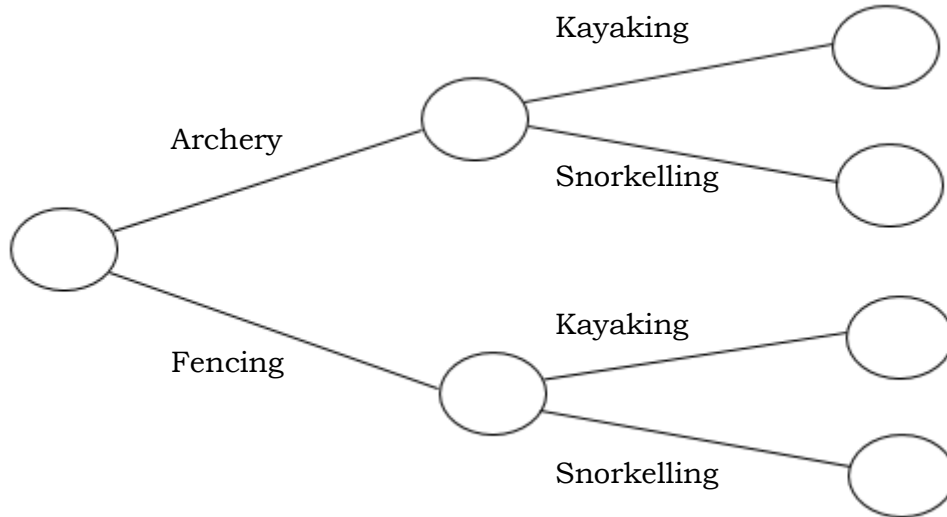
They chose either archery or fencing, and either kayaking or snorkelling.

22 of the group chose fencing and kayaking.

30% of the group chose snorkelling.

$\frac{4}{5}$ of the people who chose archery chose kayaking.

(a) Complete the frequency tree.



(4)

(b) If a person who chose fencing is chosen at random, what is the probability that they chose snorkelling?

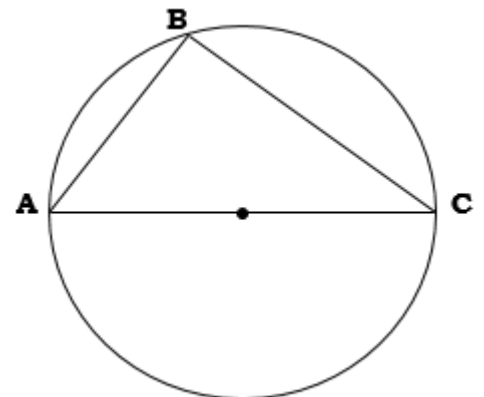
(1)

5.

AC is the diameter of the circle.

$AB = 8$ cm and $\angle ACB = 30^\circ$.

Show that the area of the circle is 64π cm².



(5)