1 **(a)** $A = x^2 + 3x$.

Find the value of A when $x = -5$.

(a) .....[2]

(b) Rearrange this formula to make n the subject.

$$C = 10n - 5$$

(b) .....[2]

4

2 Maggie has a box of chocolates.
It contains milk, plain and white chocolates.
Maggie chooses a chocolate at random.
The probability of choosing a milk chocolate is $\frac{3}{8}$.

(a) There are 40 chocolates in the box.

How many are milk chocolate?

(a) .....[2]

(b) The probability of choosing a plain chocolate is $\frac{1}{2}$.

What is the probability of choosing a white chocolate?

(b) .....[1]

3

3 Jim has done this calculation.
His answer is wrong.

Explain how you can tell the answer is wrong without working it out exactly.

$$58\,900 \div 62 = 95$$

.....

.....[2]

2

4 **(a)** Work out.

$$\frac{3}{4} \div \frac{7}{8}$$

(a) .....[2]

(b) **(i)** Express 126 as a product of its prime factors.

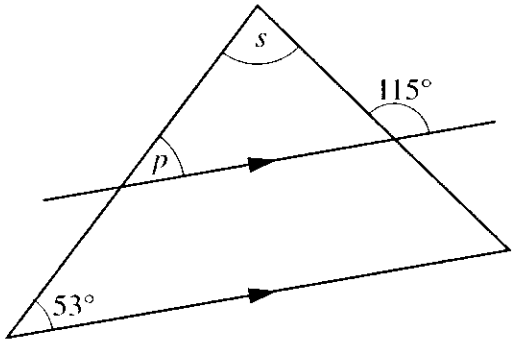
(b)(i) .....[2]

(ii) Given that $154 = 2 \times 7 \times 11$, use your answer to part **(b)(i)** to find the highest common factor (HCF) of 126 and 154.

(ii) .....[1]

5

5 **(a)** Find angles p and s.



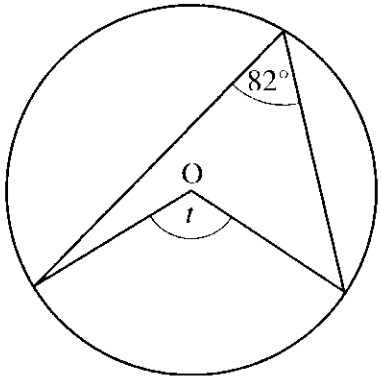
Not to scale

(a) p = ... ° [1]

s = ... ° [2]

(b) O is the centre of the circle.

Find angle t.
Give a reason for your answer.



Not to scale

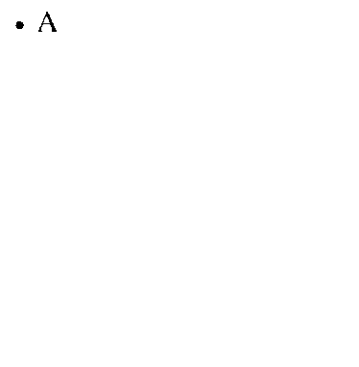
t = ... ° because .....

.....[2]

5

6 This scale drawing shows two villages, Ashwell (A) and Benton (B).
They are 8 km apart.

Scale 1 cm to 1 km



The Dean family are moving to the area.
Mrs Dean has a job in Ashwell and wants to live less than 7 km from Ashwell.
Her children will go to school in Benton so they must live nearer to Benton than to Ashwell.

Shade the region where they should look for somewhere to live. [3]

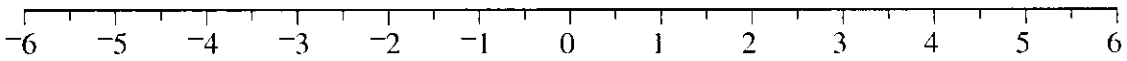
3

7 **(a)** Solve.

$$2x - 1 \geqslant 5$$

(a) .....[2]

(b) Represent your solution to part **(a)** on this number line.



[1]

3