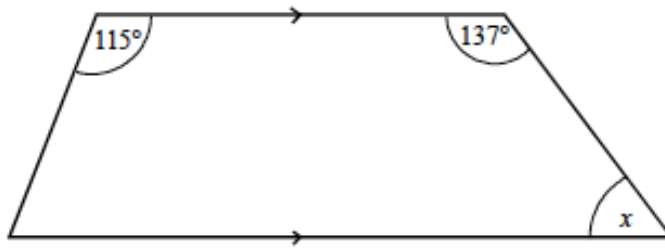


Revision A F3 (Topics 1-6) [34]

1.

The diagram shows a trapezium.



Not drawn accurately

Calculate the value of x .

(Total 2 marks)

2.

(a) Simplify $\sqrt{18} + \sqrt{32}$

(2)

(b) Rationalise $\frac{1}{\sqrt{6}}$

(1)

(Total 3 marks)

3.

Solve the equation $\frac{1}{2}x - 5 = \frac{1}{4}x + 3$

(3)

(Total 3 marks)

4.

Factorise completely $12y^2 - 8y$

(2)

(Total 2 marks)

5.

(a) Expand and simplify $(2x - 3)(3x + 5)$

(3)

(b) Simplify

(i) $y^4 \times y^{-3}$

(1)

(i) $y^4 \div y^5$

(1)

(Total 5 marks)

6.

Make t the subject of the formula $y = \frac{t}{3} - 2a$

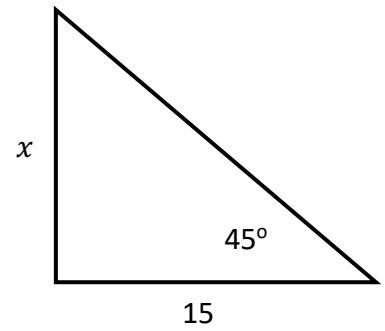
(Total 2 marks)

7.

Non-calculator

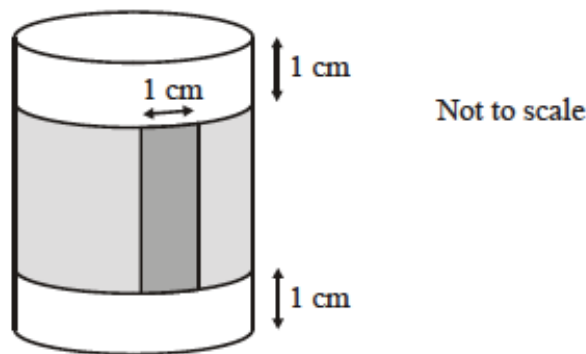
Find the exact value of x in the right-angled triangle below.

(Total 3 marks)



8.

A tin of diameter 7 cm and height 12 cm has a label around it. The label is glued together using a 1 cm overlap. There is a 1 cm gap between the label and the top and the bottom of the tin.

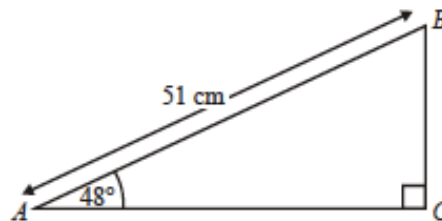


Find the length and the height of the label.

(Total 4 marks)

9.

ABC is a right-angled triangle.
 $AB = 51$ cm
Angle $CAB = 48^\circ$



Not to scale

Find the length of BC .

Give your answer to a suitable degree of accuracy.

(Total 4 marks)

10.

(a) Rob invested £2500 in a building society account at 2% per year compound interest.

Calculate the total amount in the account after three years.

(3)

(b) Jane invested some money in a building society account.

Interest of 3% was added to the account after one year.

The total in the account after the interest was added was £221.45

How much money did Jane invest?

(3)

(Total 6 marks)