

1 Solve  $x^2 + 5x + 3 = 0$

Give your solutions correct to 2 decimal places.

**(Total for question 1 is 3 marks)**

2 Solve  $2x^2 + 13x + 7 = 0$

Give your solutions correct to 2 decimal places.

**(Total for question 2 is 3 marks)**

3 Solve  $3x^2 + 2x - 13 = 0$

Give your solutions correct to 1 decimal place.

**(Total for question 3 is 3 marks)**

4 Solve  $5x^2 + x - 11 = 0$

Give your solutions correct to 3 significant figures.

**(Total for question 4 is 3 marks)**

5 Solve  $3x^2 - 11x - 13 = 0$

Give your solutions correct to 3 significant figures.

**(Total for question 5 is 3 marks)**

6 Solve  $5x^2 = 6x + 3$

Give your solutions correct to 3 significant figures.

**(Total for question 6 is 3 marks)**

7 Solve  $x^2 + 2x - 7 = 0$

Give your answers in the form  $a \pm b\sqrt{c}$ .

**(Total for question 7 is 4 marks)**

8 Solve  $x^2 - 4x - 1 = 0$

Give your answers in the form  $a \pm \sqrt{b}$ .

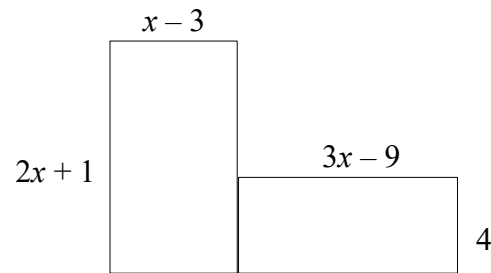
**(Total for question 8 is 4 marks)**

9 Solve  $x^2 + 6x - 11 = 0$

Give your answers in the form  $a \pm b\sqrt{c}$ .

**(Total for question 9 is 4 marks)**

- 10 The diagram shows a six sided shape formed from two rectangles.  
All measurements are given in centimetres.

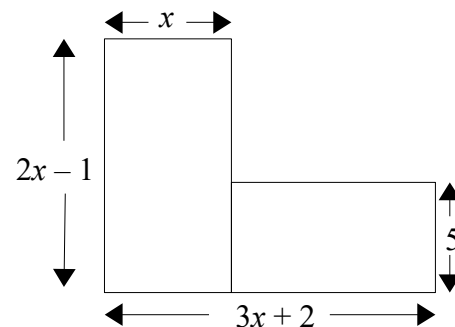


The area of the shape is  $24\text{cm}^2$

- (a) Show that  $2x^2 + 7x - 63 = 0$  (2)  
 (b) Find the value of  $x$   
 Give your answer to 3 significant figures (3)

(Total for question 10 is 5 marks)

- 11 The diagram shows a six sided shape formed from two rectangles.  
All measurements are given in centimetres.

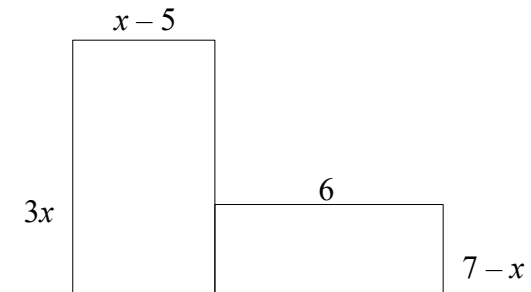


The area of the shape is  $35\text{cm}^2$

- (a) Show that  $2x^2 + 9x - 25 = 0$  (2)  
 (b) Find the value of  $x$   
 Give your answer to 3 significant figures (3)

(Total for question 11 is 5 marks)

- 12 The diagram shows a six sided shape formed from two rectangles.  
All measurements are given in centimetres.

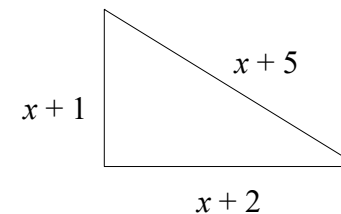


The area of the shape is  $26\text{cm}^2$

- (a) Show that  $3x^2 - 21x + 16 = 0$  (2)  
 (b) Find the value of  $x$   
 Give your answer to 3 significant figures (3)

(Total for question 12 is 5 marks)

- 13 The diagram shows a right angled triangle.  
All measurements are given in centimetres.



- (a) Show that  $x^2 - 4x - 20 = 0$  (3)  
 (b) Find the value of  $x$   
 Give your answer in the form  $a \pm b\sqrt{c}$ . (3)

(Total for question 13 is 6 marks)