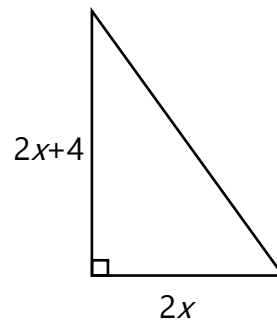


9. a. Multiply out and simplify  $(2x - 3)(2x + 1)$  ..... [2]
- b. i) Factorise  $x^2 - 3x - 10$  ..... [2]
- ii) Hence solve:  $x^2 - 3x - 10 = 0$  ..... [1]
- c. Factorise  $x^2 - 16$  ..... [1]
- d. Factorise  $12x^2 + 11x + 2$ . ..... [2]

11. Given that the area of the triangle shown in the diagram is  $10.5 \text{ cm}^2$



- i) show that  $4x^2 + 8x - 21 = 0$  ..... [3]
- ii) rewrite  $4x^2 + 8x - 21$  in the form  $a(x+b)^2 + c$  where a,b and c are integer values. .... [3]
- iii) Hence, solve  $4x^2 + 8x - 21 = 0$  ..... [3]

10. a. Write as a single fraction, and simplify if possible:  $\frac{5}{x} - \frac{4}{3x}$  ..... [2]
- b. Simplify:  $\frac{x^2 + 7x + 12}{x^2 + 10x + 21}$  ..... [3]