3. Solve the following equation.

$$12x + 19 = 2(8 + 5x)$$

[3]

4. Solve the following equation.

$$3(4x - 7) = 4x + 15$$

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[3]

(b) Expand and simplify $3(4m + 1) - 4(2m + 3)$.

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[2]

2. Solve the equation

$$16x - 5 = 3(4x + 7).$$

[3]

2. Solve the following equation.

$$4(2x - 5) = 2x + 1$$

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[3]

4. *(a)* Solve the following equation.

$$5x - 6 = 3(10 - x).$$

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[3]

(b) Expand and simplify: $4(2y - 3) - 3(y + 5)$

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[2]

(b)   Expand and simplify $4(3x - 1) + 3(x - 5)$.

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[2]

2. Solve the following equation.

$$\frac{15-4x}{7} = 3$$

[3]

9. Solve the following equation.

$$\frac{4x-8}{3} - \frac{x}{6} = 2$$

[3]

10. Solve the following equation.

$$\frac{5x + 6}{3} - \frac{3x - 4}{6} = -2$$

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[4]

12. Solve the following equation.

$$\frac{3x+1}{4} - \frac{2x+1}{2} = \frac{3}{4}$$

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[3]

11. Solve the following equation.

$$\frac{4x-1}{4} + \frac{x+8}{2} = \frac{3}{4}$$

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[3]

3.
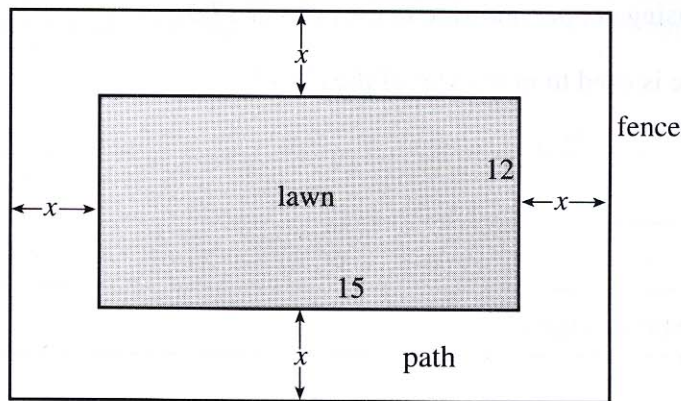
The diagram represents a rectangular lawn measuring 15 metres by 12 metres, surrounded by a path of width x metres. There is a fence all around the outside of the path.
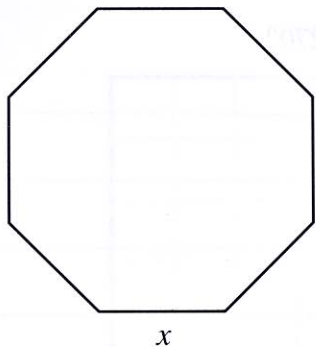
(a) Given that the length of the fence is 74 metres, write down an equation that x satisfies.

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[2]

(b) Solve the equation to find the value of x.

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[2]

3.

x
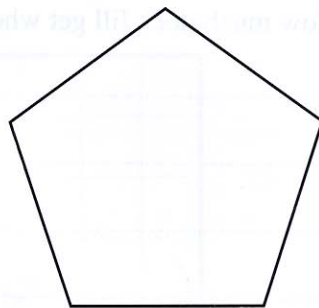
The sides of a regular octagon are x cm long. Each side of a regular pentagon is 6 cm longer than each side of the octagon. The perimeter of the octagon is 3 cm longer than the perimeter of the pentagon.

(a)   Write down an equation that x satisfies.

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[2]

(b)   Solve the equation and hence find the length of a side of the pentagon.

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[3]