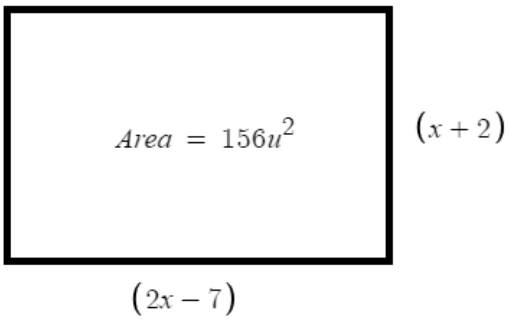
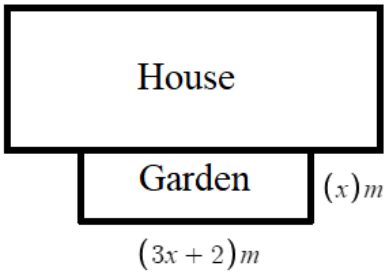
Quadratics Test – www.m4ths.com – Steve Blades

(1) Solve $x^2 - 25 = 0$
(2) Solve $x^2 - 3x = 0$
(3) Solve $x^2 - x - 12 = 0$
(4) Solve $x^2 = 6x + 7$
(5) Solve the equation $3x^2 + 2x - 10 = 0$ giving your answers to 2 decimal places.
(6) Solve $2x^2 - 200 = 0$
(7) Solve $4 + 4x + x^2 = 0$
(8) Solve the equation $(x - 3)(x + 4) = 0$
(9) Solve the equation $5x^2 - 8x + 1 = 0$ giving your answers to 3 significant figured.
(10) Solve $4x^2 + 10x = 0$
(11) The diagram below shows a rectangle.



(a) Set up and solve a quadratic equation to find x.
(b) Hence find the perimeter of the of the rectangle.
(12) Solve the quadratic equation $x^2 = 9x$ giving both solutions.
(13) Find the solutions to $8x^2 = 2x + 5$ giving your answers to 3 significant figured.
(14) Fred owns a large house and a small garden. He buys some wire to fence off his garden. **The fence has 3 sides as shown below**. One of the sides has length$(3x + 2)$ metres and 2 of the sides are x metres.



Given that the fenced garden has an area of 85m², find the length of the wire Fred used.
(15) The squares of two consecutive integers is 6161. Find the integers.
(16) The height of a rocket is modelled as $h = 6t^2 - 3t$ where h is the height in metres above the ground and t is the time in seconds after its launch.
(a) Find the height of the rocket after 0.1 seconds.
(b) Find the time the rocket returns to the ground.
(17) The sum of the squares of two consecutive odd numbers is 19210. Find the numbers.
(18) The difference between the square of a number and the square of twice the number is 27. Find the number.

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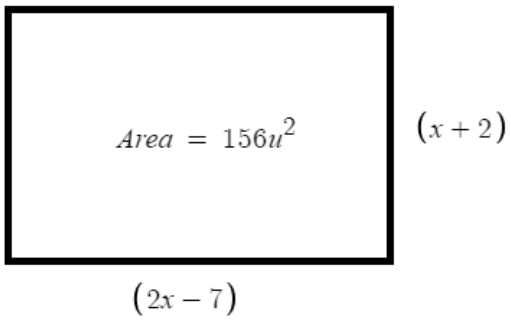

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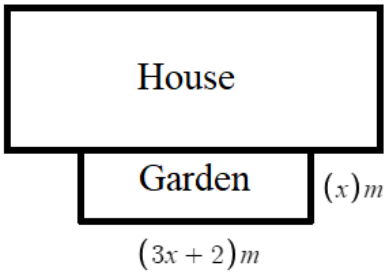

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