Mathematics

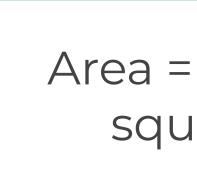
Solving adfected quadratic equations

Mr Coward

Try this

Find as many possible pairs of side lengths for each rectangle.

Area = 6 units squared



What do you notice?

Area = 0 units squared



Independent task

1) Solve the following equations

a) (2x-3)(5x-2) = 0 b) (2x+3)(5x+2) = 0 c) 0 = (x-3)(x+2)

d)
$$0 = (3 - x)(2 + x)$$
 e) $(2x + 1)^2 = 0$

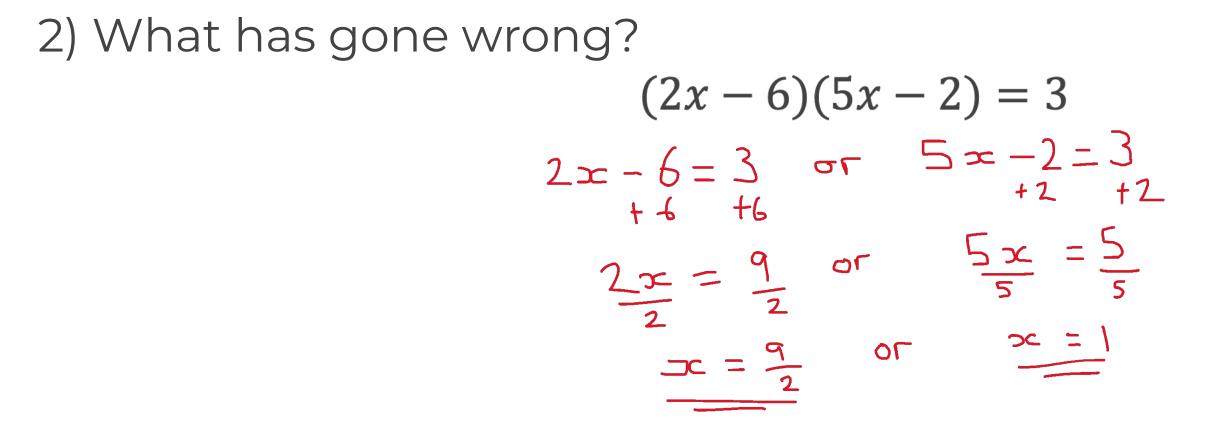
 $h)\frac{x}{5}(x+7) = 0$ g(x(3+x)) = 0

$f) 0 = (1 - 4x)^2$

$i \left(\frac{x}{4} + 7\right) \left(7 - \frac{x}{4}\right) = 0$



Independent task



3) The below shows a quintic equation, to the power 5. a) How do you know it will have a power of 5? Find all the solutions of the quantic. b)

x(x-2)(2x+3)(3x-4)(4x+5) = 0

This quantic has five unique solutions, create a quantic with less than 5 C) solutions



Explore

Zaki says this bracket will have two unique solutions because the brackets are different, show Zaki is incorrect.

$$(2x-6)(3x-9) = 0$$

Can you explain why the brackets give the same solution? Can you find another bracket that would have worked to go with (2x - 6)? Can you create your own question like this?

