**EXCELLENCE ANSWERS Algebra**

1. Let the sides be of length *x* and *y*.

Area = 53 so 

Perimeter = 36 so



Sub into area equation



The squares are of length 2cm and 7cm.

2. For real solutions 



Hence there are no real solutions for **non-zero values** of *a.*

3. If roots are b and 2b

Equ is (x – b)(x – 2b) = 0

x2 – 3bx + 2b2 = 0

compare x2 – 6kx + (10k + 12) = 0

3b = 6k so b = 2k

8b2 = 10k + 12

So 8k2 = 10k + 12

8k2 – 10k – 12 = 0

4k2 – 5k – 6 = 0

(k – 2)(4k + 3)= 0

k = 2 or -0.75

4.

*Roots b and 3b*

*Equ is (x – b) (x – 3b) = 0*

*x2 – 4bx + 3b2 = 0*

*compare x2 – px + q = 0*

*so p = 4b and q = 3b2*

*b = p subs q = 3 p2*

*4 16*

*16q = 3p2*

5. For one real soln 

