WJEC June 2018 Q8

Solve the following simultaneous equations.

$$y = 5x^2 + 6x - 7$$
$$y = 2x + 3$$

Use an algebraic method and give your answers correct to 2 decimal places. [6]

WJEC June 2014 Q11

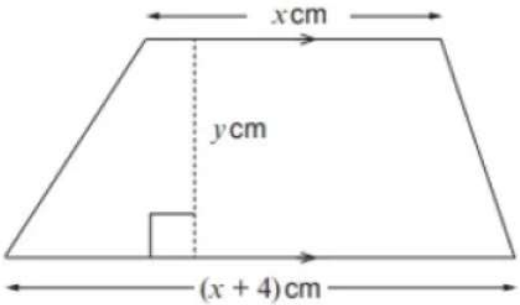

Diagram not drawn to scale

The area of the trapezium in the diagram is $28\,cm^2$.
A rectangle of length $(x + y)$ cm and width y cm has an area of $43\,cm^2$.

(a) Show that $xy = 28 - 2y$ and $xy = 43 - y^2$. [3]

(b) Hence write down a quadratic equation in terms of y to calculate the lengths of the parallel sides of the trapezium.
You must use an algebraic method, **not** a trial and improvement method. [4]

WJEC June 2013 Q3

Consider two squares of different sizes.
The perimeter of the larger square is 12 cm greater than the perimeter of the smaller square.
The area of the larger square is $30\,cm^2$ greater than the area of the smaller square.

Calculate the dimensions of each square.
You must use an algebraic method, **not** a trial and improvement method.

[7]

WJEC June 2012 Q11

A right-angled triangle, ABC, has an area of $1350\,cm^2$.
The hypotenuse of the right-angled triangle, AC, is 75 cm and the perimeter is 180 cm.
Given that $AB = x$ cm and $BC = y$ cm, calculate the lengths of the sides AB and BC of the right-angled triangle.

WJEC June 2012 Q10

Solve the simultaneous equations

$$2x + y = 13,$$
$$x^2 + xy - 30 = 0.$$

[6]

WJEC June 2011 Q7

You will be assessed on the quality of your written communication in this question.

A rectangle A has sides of length $(x + 1)$ cm and $(y + 3)$ cm.
The perimeter of A is 62 cm.
A rectangle B has sides of length $(x + 9)$ cm and $(2x + y)$ cm.
The area of B is 703 cm^2.

Calculate the dimensions of both these rectangles.

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[9]
