

# SIMULTANEOUS EQUATIONS (QUADRATIC)

[ESTIMATED TIME: 75 minutes]

# GCSE

(+ IGCSE) EXAM QUESTION PRACTICE

1.

[5 marks]

Solve the simultaneous equations

$$y = x^2$$
$$y = 2x + 15$$

$$x = \dots\dots\dots, y = \dots\dots\dots$$

$$x = \dots\dots\dots, y = \dots\dots\dots$$



Solve the simultaneous equations

$$y = x^2$$

$$y = 7x - 10$$

.....



Solve the simultaneous equations

$$y = 2x^2$$

$$y = 20 - 3x$$

Show clear algebraic working.

.....



Solve the simultaneous equations

$$y = 3x - 1$$

$$x^2 + y^2 = 5$$

.....



Solve  $x^2 + y^2 = 20$   
 $y = 10 - 2x$

Show clear algebraic working.



Solve the simultaneous equations

$$\begin{aligned}y &= 3x + 2 \\ x^2 + y^2 &= 20\end{aligned}$$

Show clear algebraic working.

.....



Solve the simultaneous equations

$$2x + y = 6$$

$$x^2 + y^2 = 20$$



Solve the simultaneous equations

$$2x - y = 7$$

$$x^2 + y^2 = 34$$

Show clear algebraic working.





Solve the simultaneous equations

$$y = 5x - 1$$

$$y = (x + 1)^2$$

Show clear algebraic working



Solve the simultaneous equations

$$xy = 12$$

$$y - 3x = -9$$

Show clear algebraic working.

.....  
(7)



Solve the simultaneous equations

$$y = 3x^2 + 7x + 9$$

$$y = 4x + 15$$

Show clear algebraic working.

.....



Solve the simultaneous equations

$$3y^2 + 4x^2 = 16$$

$$y - 2x = -4$$

Show clear algebraic working.

.....  
(7)

