

Simultaneous Equations

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1) Simultaneous Equations: Easier

1) Solve the simultaneous equations.

$$2x + 3y = 9$$
$$5x + 3y = 18$$

$$2 - 0$$

$$5 \times + 3y = 18$$

$$2 \times + 3y = 9$$

$$3 \times = \frac{9}{3}$$

$$x = 3$$

Sub
$$5c = 3$$
 into 1

$$2x + 3y = 9$$

$$46 + 3y = 9$$

$$3y = 3$$

$$y = 1$$

$$y = \frac{1}{3}$$
(3 Marks)

2) Solve the simultaneous equations.

$$4x + 2y = 9 \times 2$$

$$8x + 8y = 20$$

(2) - (3)

$$8x + 8y = 20$$

 $8x + 4y = 18$
 $4y = 2$
 $4y = 2$
 $4y = 3$

3
$$8x + 4y = 18$$

Sub $y = 0.5$ into (1)
 $4x + 1 = 9$
 $4x = 8$
 $4x = 2$
 $x = 2$
 $y = 0.5$
(4 Marks)

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1) Simultaneous Equations: Medium

7) Solve the simultaneous equations.

$$2 + 3$$

$$4x - 9y = -34$$

$$18x + 9y = 45 + 22x = \frac{1}{22}$$

$$x = 0.5$$

Sub
$$x = 0.5$$
 into (1)
 $3 + 3y = 15$
 $3y = 12$
 $3y = 12$
 $y = 4$
 $x = \frac{0.5}{4}$
(4 Marks)

8) Solve the simultaneous equations.

$$2) + 3$$

$$8x - 6y = 51$$

$$15x + 6y = 87 + 4$$

$$23x = 138$$

$$23$$

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5x + 2y = 29 + 3

8x - 6y = 51

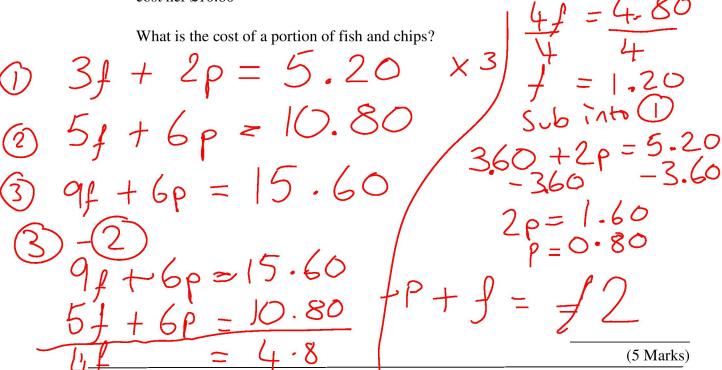
(4 Marks)



1) Simultaneous Equations: Harder

9) Bill goes into a chip shop and buys 3 fish and 2 portions of chips, it cost him £5.20

Jenny also goes into the same chip shop. She buys **5 fish** and **6 portions of chips,** it cost her £10.80



10) There are some ducks and some sheep on a farm. Altogether they have 35 heads and 94 feet.

