

Show all working – <u>NO</u> calculator required.

<b>1.</b> a)	A straight line has equation $4x - 6y - 9 = 0$ .	
	Find the gradient and y-intercept of this line.	(3)
b)	State where this line crosses the x-axis	(2)

2. A second line is parallel to the line 2y - 5x = -2 and passes through the point (3, -5)Find the equation of this second line.

- 3. The diagram below shows the A(-1,6) straight line joining points A and B. Find the equation of the line AB. a) Give the equation in its simplest form.
  - **b**) State the y-intercept.

0 (3) х B(3,-4) (1)

Marks

(3)



The cost of a journey with Shona's Taxis depends on the distance travelled.

The graph below shows the cost, P pounds, of a journey with Shona's Taxis against the distance travelled, d miles.

Point A represents a journey of 6 miles which costs £10. Point B represents a journey of 15 miles which costs £28.

- a) Find the equation of the line in terms of P and d. Give the equation in its simplest form. (3)
- **b**) Calculate the cost of a journey of 11 miles

5. Weight (kilograms)

A Midwife records the weight of some the babies in his care.

The scattergraph shows the relationship between the age, A months, and the weight, W kilograms, of the babies. A line of best fit is drawn.

Point D represents a 2 month old baby which weighs 5 kg. Point E represents a 1 year old baby which weighs 10 kg.

- a) Find the equation of the line of best fit in terms of A and W. (3)
- **b**) Use your equation from part (**a**) to estimate the weight of a 9 month old baby. (1)

## **Total Marks: 20**

(1)