

LINEAR FUNCTIONS

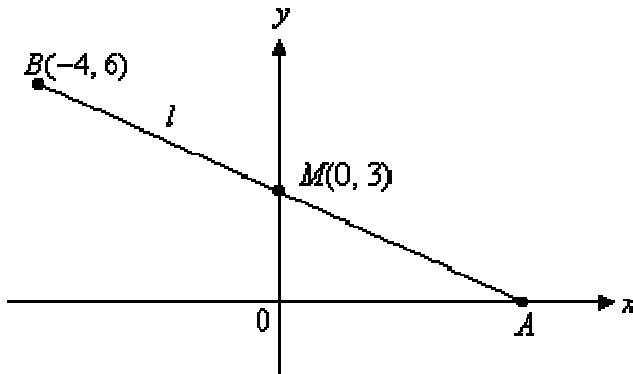
Name: _____ () Class: _____ Date: _____

LINEAR GRAPHS

1 The equation of a line L is
 $6x = 14 - 2y$.

- (a) Write down the gradient of the line L .
- (b) Find the equation of the line H which passes through the point $(6, 8)$ and is parallel to the line L .
- (c) The point $(n, -2n)$ lies on the line L . Calculate the value of n .

2



In the diagram, l is the line which passes through the points $B(-4, 6)$, $M(0, 3)$ and A . A lies on the x axis.

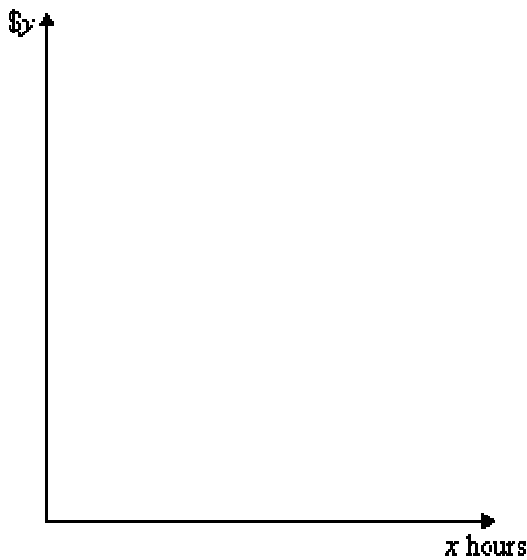
- (a) Given that $AM = MB$, write down the coordinates of the point A .
- (b) Find the equation of the line AB .
- (c) Another line parallel to the y -axis and passing through $(-2, 1)$ meets AB at T . Find
 - (i) the coordinates of the point T ,
 - (ii) the area of $\triangle AOT$.

3 In the axes below, draw the graphs which illustrate each of the following statements:

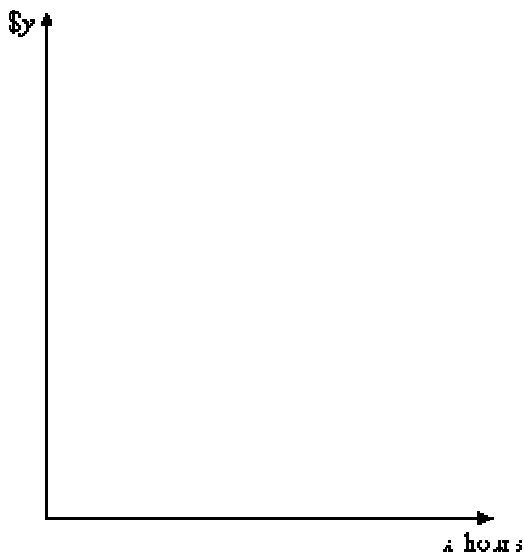
(a) The cost of repair of y dollars of a computer which consists of a transport cost of \$50 plus x hours of labour charge at \$10 per hour.

(b) The taxi fare, y dollars, which cost \$3.20 for the first x kilometers and at a rate of \$0.20 for every additional kilometer travelled thereafter.

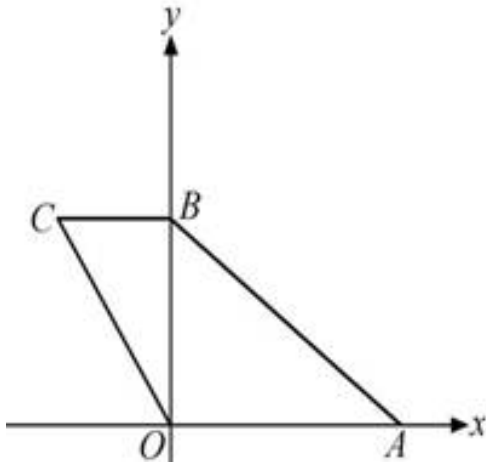
(a)



(b)



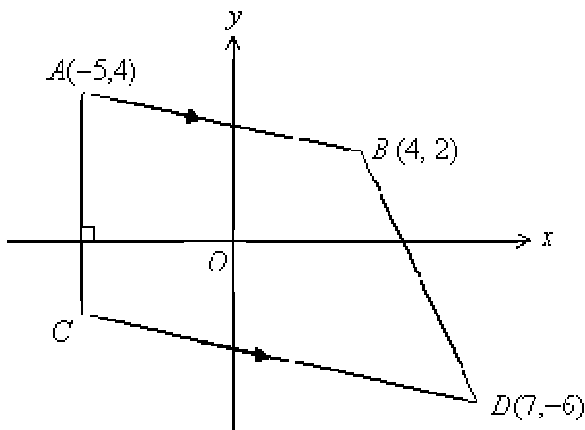
4



In the diagram, $OABC$ is a trapezium where O is the origin, A and B are points on the x axis and the y axis respectively.

- (a) Given that $OA \parallel CB$, $CB = 3$ units and $OA = OB = 6$ units, find the coordinates of B and C .
- (b) Hence, find
 - (i) the equation of AB ,
 - (ii) the area of the trapezium $OABC$.

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In the diagram, $AB \parallel CD$ and AC is perpendicular to the x -axis.

- (a) Show that the equation of the straight line CD is $9y + 2x + 40 = 0$.
- (b) Hence, or otherwise, find the coordinates of C .