Marked example 1

Paper 1 style · No calculator

1 6 marks SL 2.11 ●○○ Routine

The point $A(-2, 4)$ lies on the graph of $y = f(x)$. Write down the coordinates of the image of A on each of the following graphs.

(a) $y = f(x) - 3$ [1]

(b) $y = f(x + 2)$ [1]

(c) $y = -f(x)$ [1]

(d) $y = f(-x)$ [1]

(e) $y = 3f(x)$ [1]

(f) $y = f(2x)$ [1]

MARKSCHEME (a)

$(-2, 1)$ A1

Total 1 mark

MARKSCHEME (b)

$(-4, 4)$ A1

Total 1 mark

Note $f(x + 2)$ moves the graph 2 to the left.

MARKSCHEME (c)

$(-2, -4)$ A1

Total 1 mark

MARKSCHEME (d)

$(2, 4)$ A1

Total 1 mark

MARKSCHEME (e)

$(-2, 12)$ A1

Total 1 mark

MARKSCHEME (f)

$(-1, 4)$ A1

Total 1 mark

Note Scale factor $\frac{1}{2}$ on the x-coordinates.

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