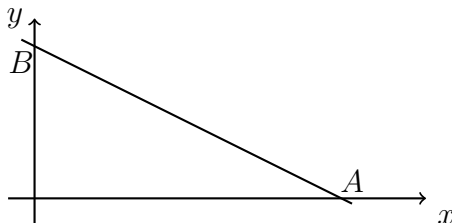
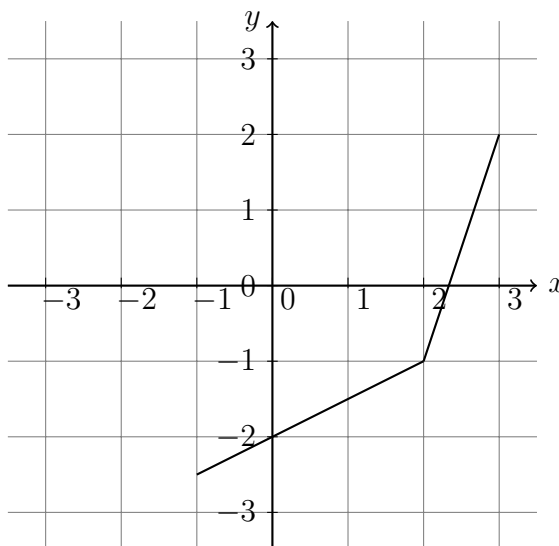


4.8 Homework Pre-Quiz: Function operations, Linear equations

1. The diagram shows the straight line L_1 , which intersects the x -axis at $A(6, 0)$ and the y -axis at $B(0, k)$. The gradient of L_1 is $-\frac{1}{3}$. *Diagram is not to scale*



- (a) Find the value of k . [2 points]
(b) Write down the equation for the line L_1 . [2 points]
(c) The line L_2 is perpendicular to L_1 and passes through the origin. [2 points]
Find the equation for the line L_2 .
2. Let $f(x) = 8x + 3$ and $g(x) = 4x$, for $x \in R$.
- (a) Write down $g(2)$. [1 point]
(b) Find $(f \circ g)(x)$. [2 points]
(c) Find $f^{-1}(x)$. [2 points]
3. Spicy: The diagram below shows the graph of a function f for $-1 \leq x \leq 3$.



- (a) Write down the value of $f(2)$. [1 point]
(b) Write down the value of $f^{-1}(-2)$. [2 points]
(c) Sketch the graph of f^{-1} on the grid. [3 points]

Solutions

