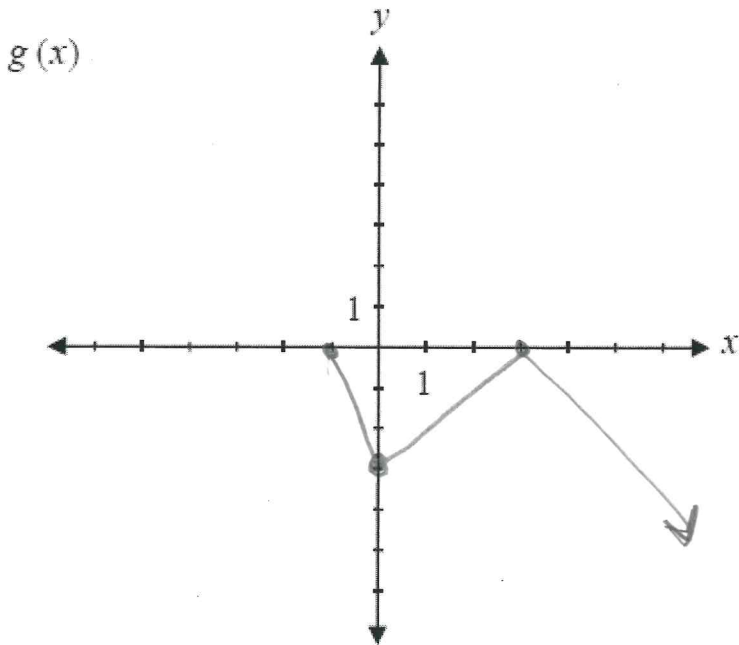
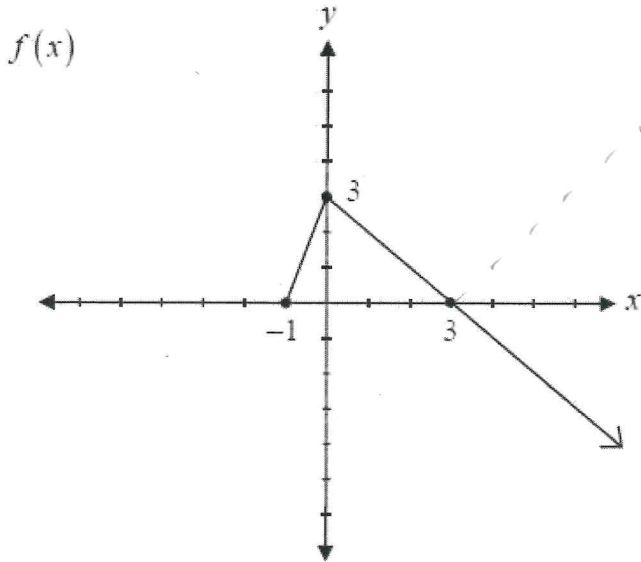


SOLUTIONS

Question 41

2 marks

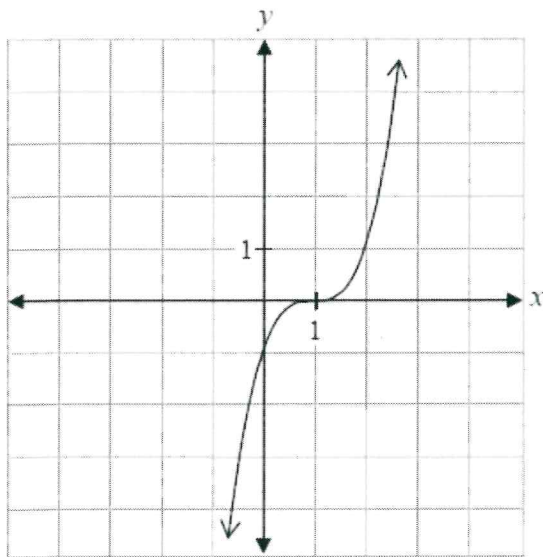
Given the graph of $f(x)$, sketch the graph of the function $g(x) = -|f(x)|$.



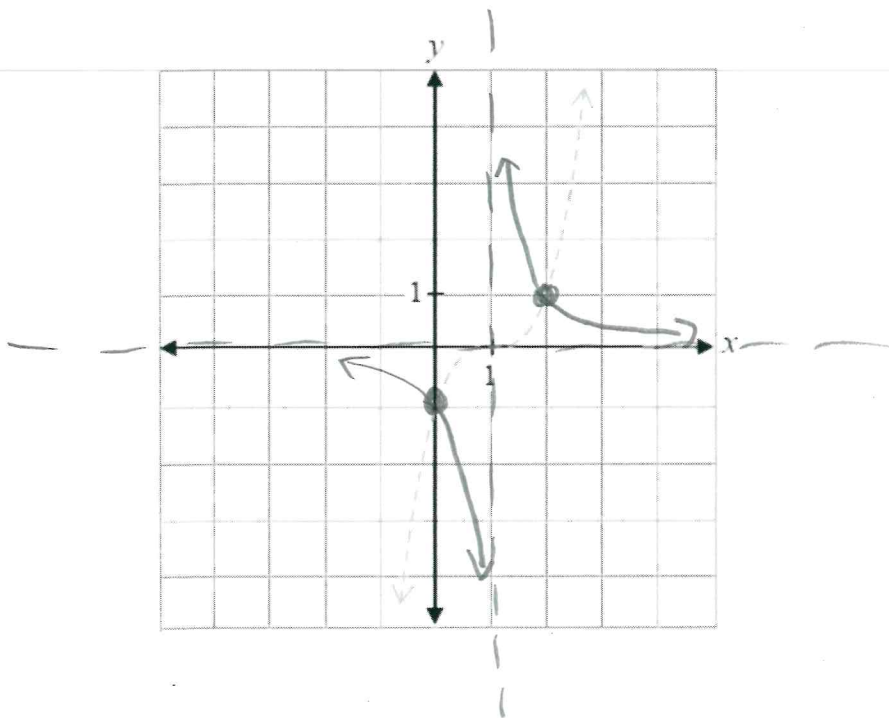
Question 15

2 marks

Given the graph of $y = f(x)$ below.



Sketch the graph of $y = \frac{1}{f(x)}$.



The graph of $f(x)$ has already been drawn for your reference. No marks will be awarded for the graph of $f(x)$.

Question 36

2 marks

Identify the domain and range of the following function:

$$f(x) = \frac{3}{x^2 + 1}$$

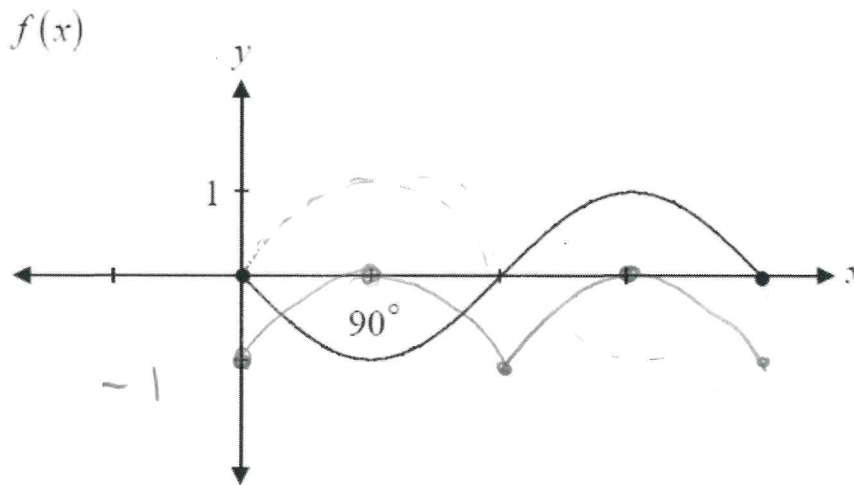
D: $x \in \mathbb{R}$.

R: $(0, 3]$

Question 33

2 marks

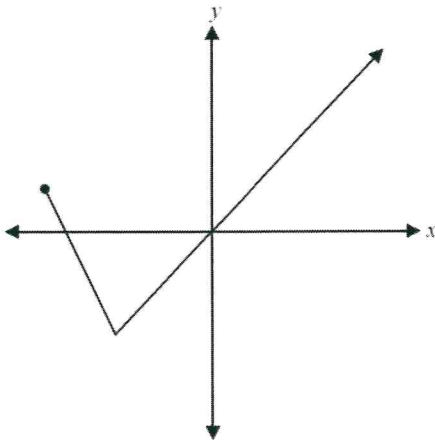
Given the sinusoidal function $f(x)$ below, sketch the graph of $g(x) = |f(x)| - 1$.



Question 8

1 mark

Given the graph of $f(x)$ below, explain how you would sketch the graph of $y = |f(x)|$.



The portion of the graph below the x-axis would reflect over the x axis.

All negative y coordinates become positive.

Question 42

1 mark

The function $f(x)$ is transformed.

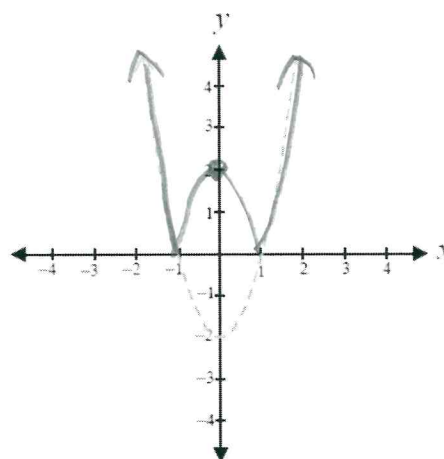
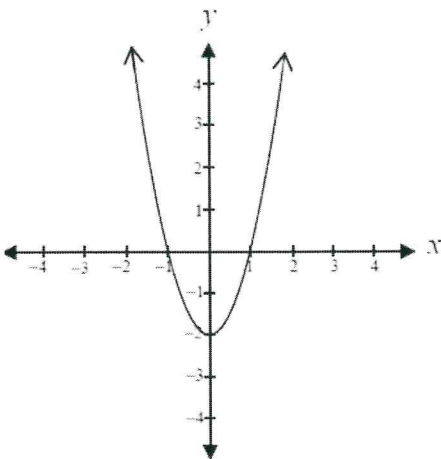
A new function, $y = \frac{1}{f(x)}$, is created that does not have any vertical asymptotes.

What can you conclude about the original function $f(x)$?

$$f(x) \neq 0$$

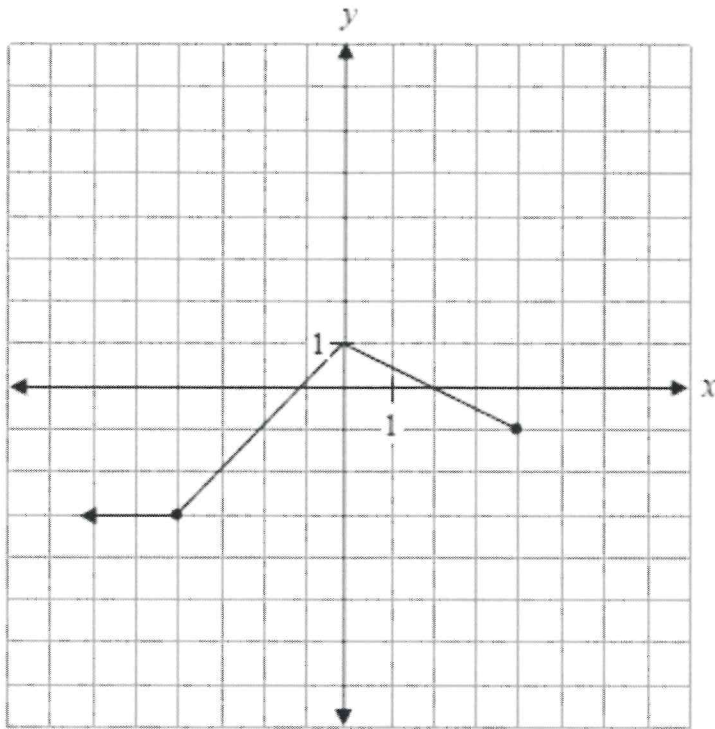
June 2012

30. Given the graph of $y = f(x)$, sketch the graph of $y = |f(x)|$.

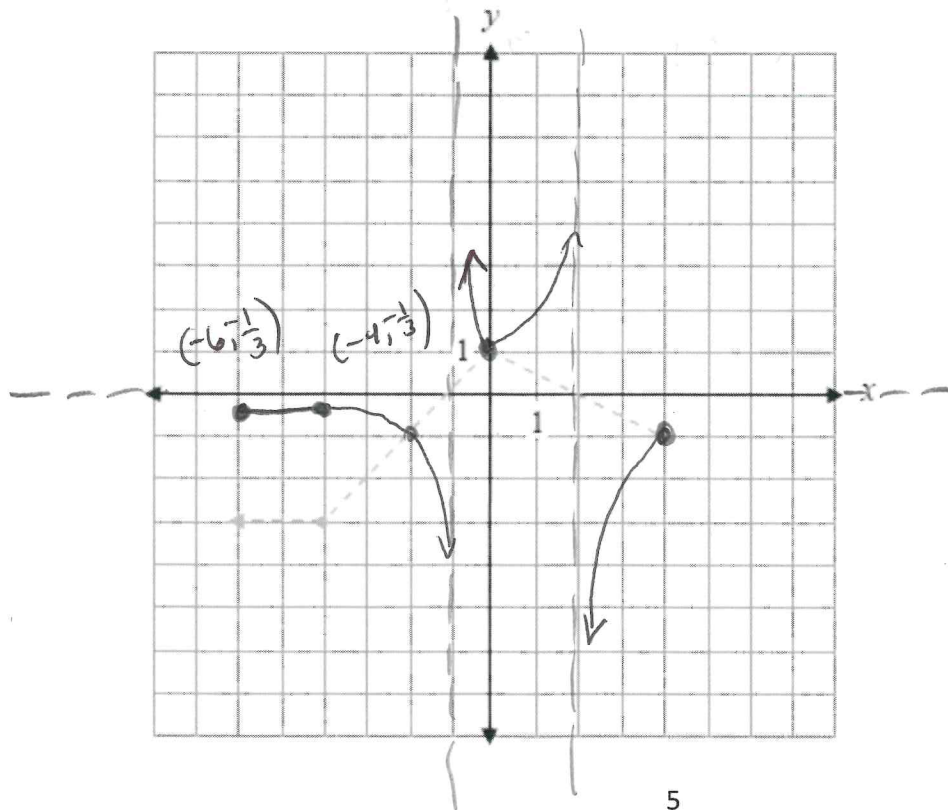


The graph of $y = f(x)$ has already been drawn for your reference. No marks will be awarded for this graph.

42. The graph of the function $y = f(x)$ is shown below.

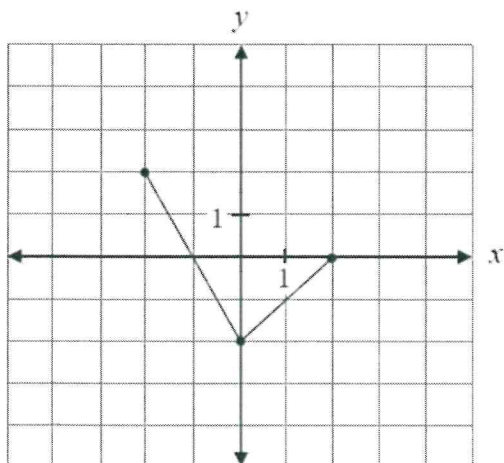


b) Sketch a clearly labelled graph of $y = \frac{1}{f(x)}$.



The graph of $y = f(x)$ has already been drawn for your reference.
No marks will be awarded for this graph.

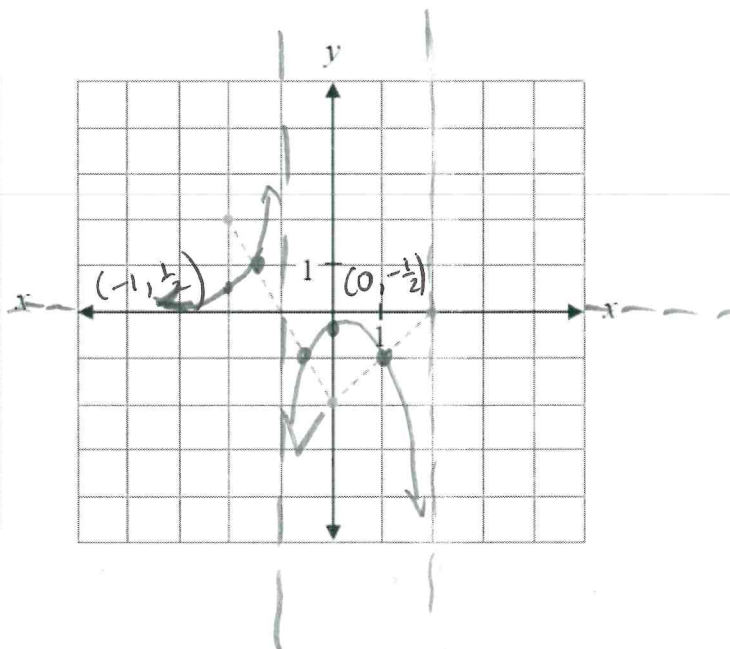
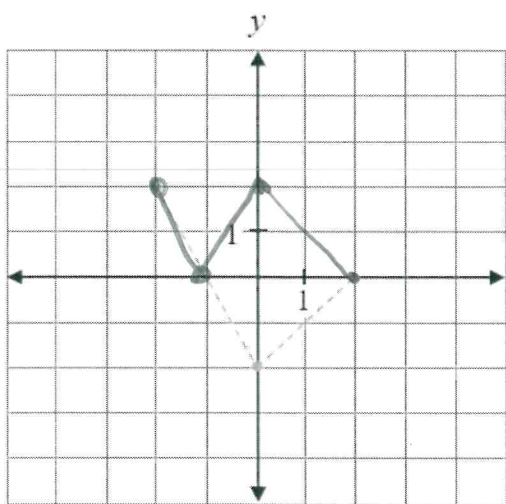
44. The graph of $y = f(x)$ is sketched below.



Sketch a clearly labelled graph of:

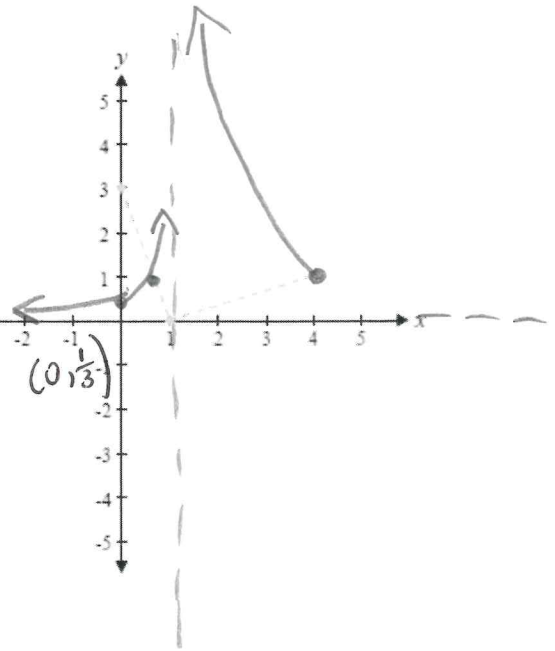
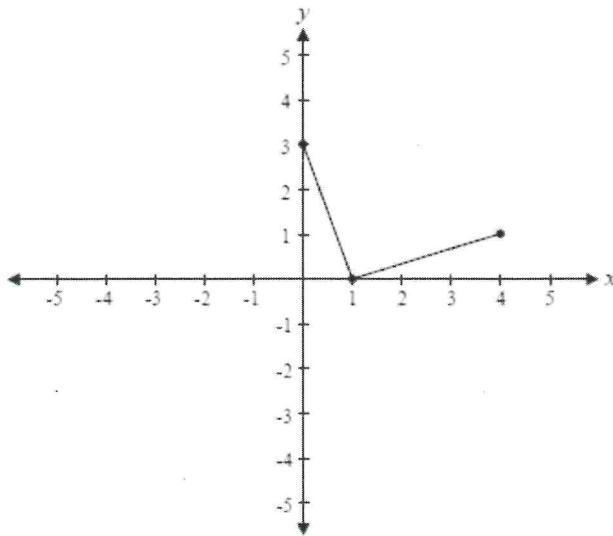
b) $y = |f(x)|$

d) $y = \frac{1}{f(x)}$

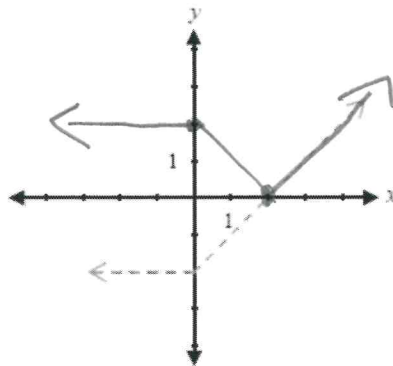
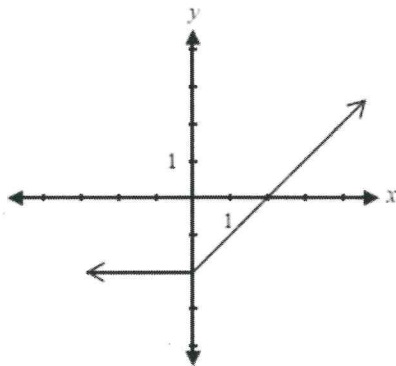


10. The graph of the function $y = f(x)$ is shown below.

c) $y = \frac{1}{f(x)}$

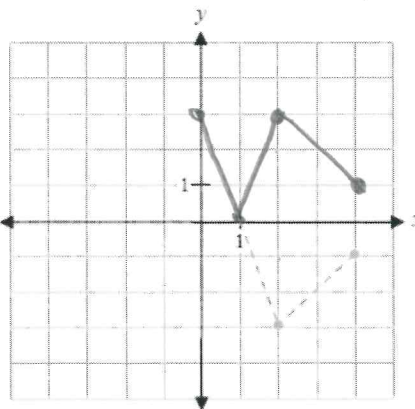
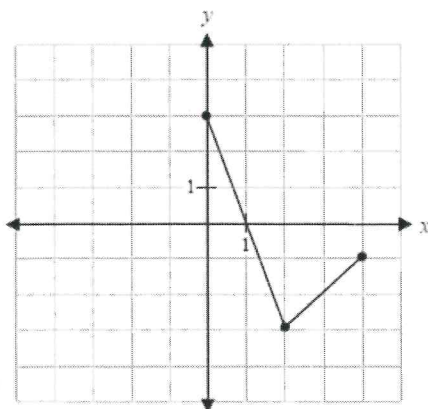


35. Given the graph of $y = f(x)$ below, sketch the graph of $y = |f(x)|$.



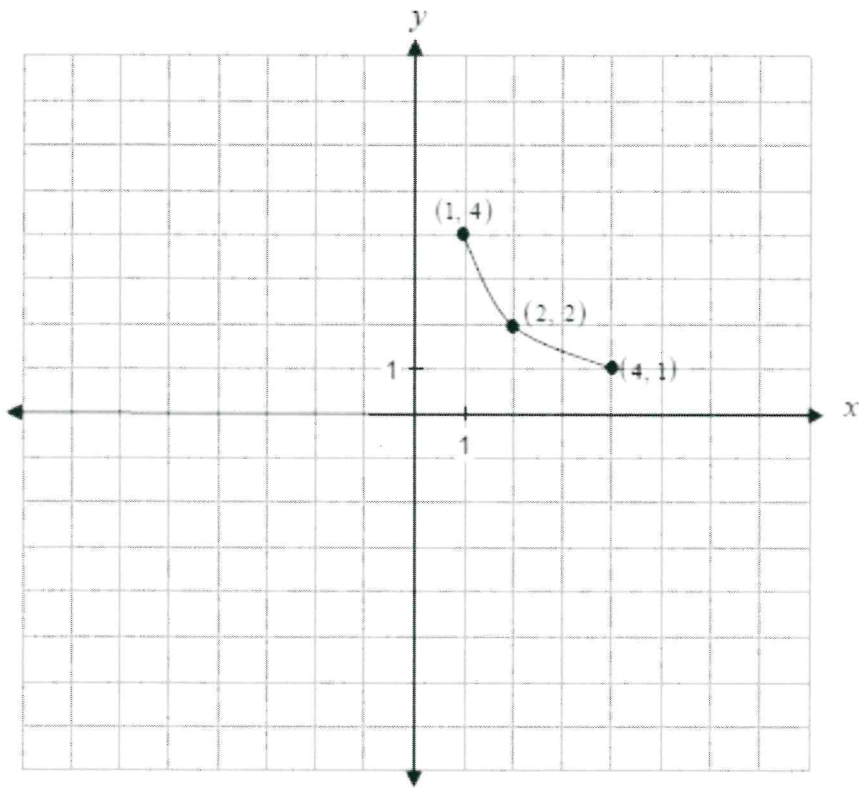
The graph of $y = f(x)$ has already been drawn for your reference.
No marks will be awarded for this graph.

29. The graph of $y = f(x)$ is shown below. Sketch the graph of $y = |f(x)|$.

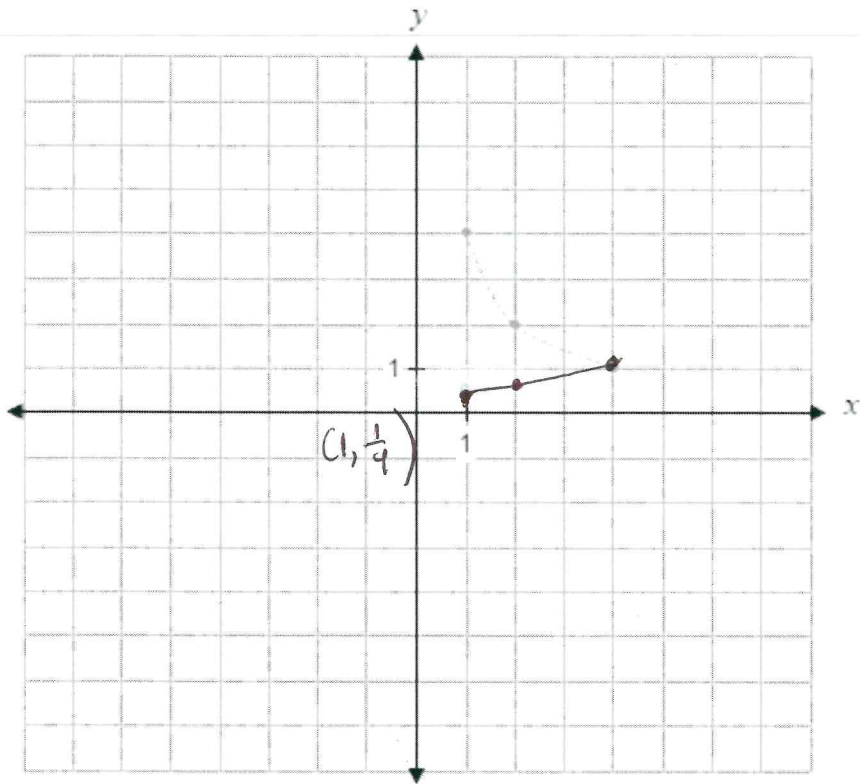


The graph of $y = f(x)$ has already been drawn for your reference.
No marks will be awarded for this graph.

47. The graph of the function $y = f(x)$ is shown below.



b) Sketch a clearly labelled graph of $y = \frac{1}{f(x)}$.



The graph of $y = f(x)$ has already been drawn for your reference.

No marks will be awarded for this graph.

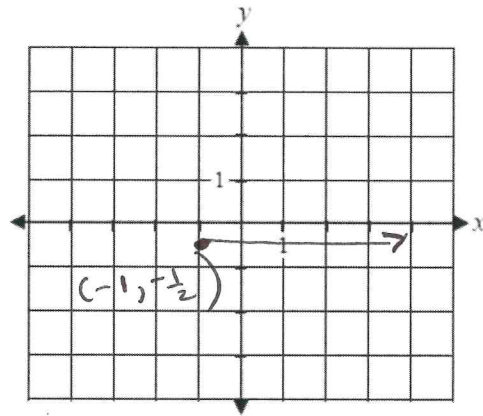
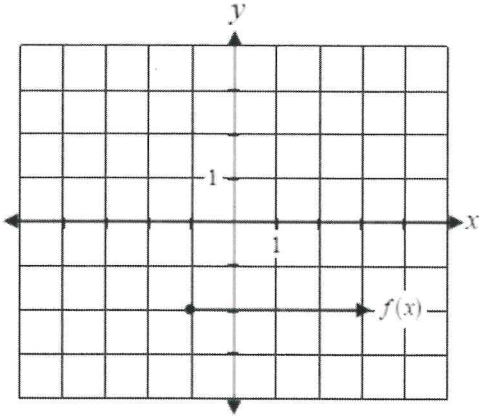
June 2010

35. A point on the graph $y = f(x)$ is (a, b) . Find a point on the graph of $y = \frac{1}{f(x)}$.

$$\left(a, \frac{1}{b}\right)$$

January 2010

36. The graph of $y = f(x)$ is shown below. Sketch the graph of $y = \frac{1}{f(x)}$.



38. If a point on the graph of $y = f(x)$ is $(-2, -3)$, what point must be on the graph of $y = |f(x)|$?

$$(-2, 3)$$

