

1. State if the following are true or false.

a)  $|3 - 2 \times 4| - |3 - 1| = 7$

b)  $|2x - 1| + 4 = 5 - 2x$  if  $x = \frac{1}{2}$

2. Solve the following algebraically. Verify each answer.

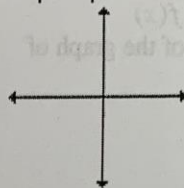
a)  $|3x - 2| = 1 - x$

b)  $|2x - 3| = -5$

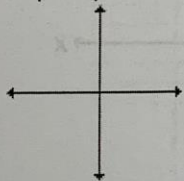
c)  $|x^2 - 7x + 2| = 10$

3. Solve graphically.

a)  $|x + 1| = -2x$

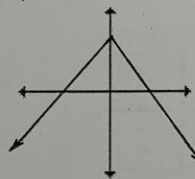


b)  $|x - 2| - x = 1$

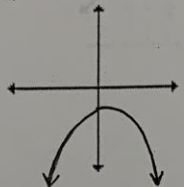


4. The graph of  $y = f(x)$  is given, sketch the graph of  $y = |f(x)|$ .

a)



b)

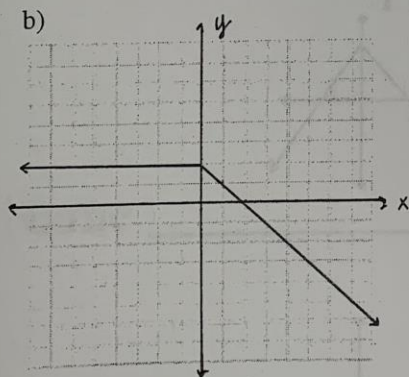
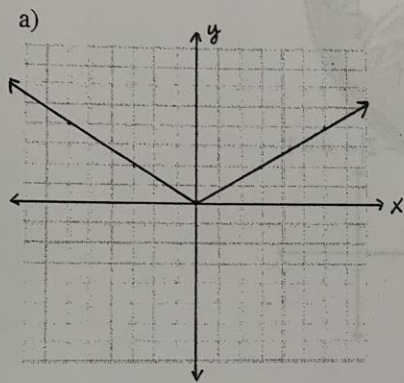


5. Given the graph of  $y = f(x)$ ,

i) sketch the graph of  $y = \frac{1}{f(x)}$

ii) state the equation of the vertical asymptote(s) of  $y = \frac{1}{f(x)}$

iii) state the y-intercept of the graph of  $y = \frac{1}{f(x)}$



Answers

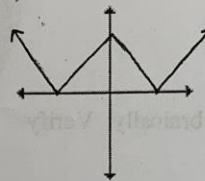
1. a) False      b) True

2. a)  $x = \frac{3}{4}, \frac{1}{2}$       b) No Solution

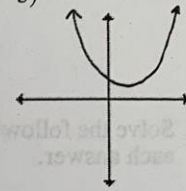
c)  $x = -1, 3, 4, 8$

3. a)  $x = -\frac{1}{3}$       b)  $x = \frac{1}{2}$

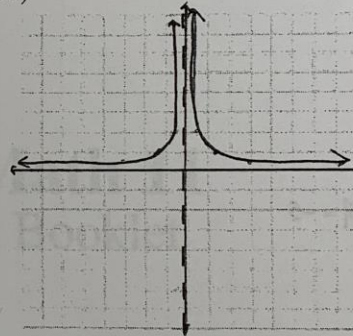
4. a)



b)

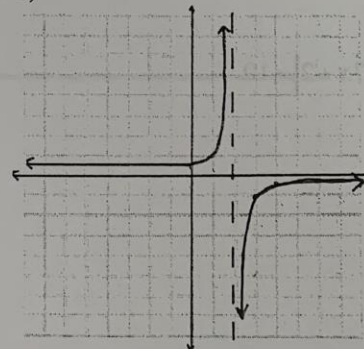


5. a)



ii)  $x = 0$       iii) no y-intercept

b)



ii)  $x = 2$       iii)  $y = \frac{1}{2}$