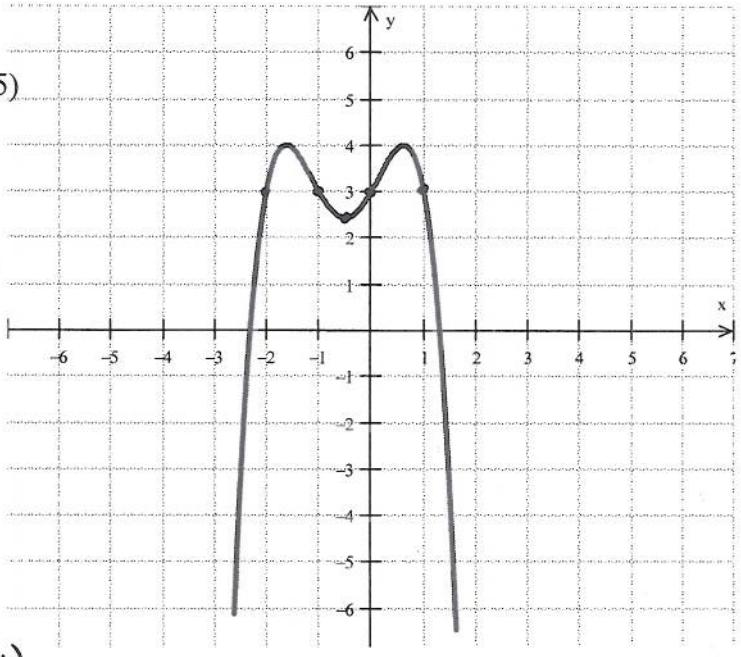
SOLUTIONS

14. In the following graph of $f(x)$



a) Find the approximate value of $f(-0.5)$

$f(-0.5) = 2.5$

b) Give all value(s) for which $f(x) = 3$.

$x = -2, x = -1, x = 0, x = 1$

c) Give the domain.

$\mathbb{R}$ same as $(-\infty, \infty)$

d) Give the range.

$(-\infty, 4]$

also o.k. to use $(-\infty, 4)$

15. A factory makes desks. The cost, $C(x)$, of running the factory is \$1700 per day plus \$125 for each desk manufactured.

a) What does x stand for?

Number of desks manufactured (that day)

b) What does $C(x)$ stand for?

Total cost of running the factory on a certain day (when x desks are made) in \$

c) Set up a function that models $C(x)$.

$C(x) = 125x + 1700$

d) Use the model from above to calculate how many desks were made on a day where the total cost was \$6450 (*Show how to solve in proper notation. Do NOT guess the answer and just perform a check.*)

$$6450 = 125x + 1700$$
$$-1700 \qquad -1700$$
$$\frac{4750}{125} = \frac{125x}{125}$$
$$38 = x$$
$$x = 38$$

38 desks were made that day