



Question 1

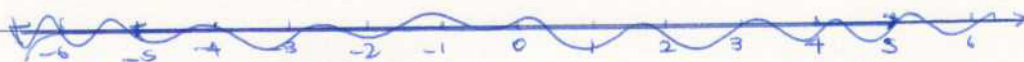
(a) 1.33

(b)  $|x+3| < 2$

$$x+3 < 2 \quad -x-3 < 2$$

$$x < -1 \quad -x < 5$$

$$x > -5$$



(c)  $x^2 - 2x - 8 = 0$        $x \rightarrow -8$

$$+ \rightarrow -2$$

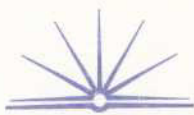
$$(x-4)(x+2) = 0 \quad \text{nos} = -4, 2$$

$$x-4=0 \quad x+2=0$$

$$x=4 \quad x=-2$$

$$x = 4, -2$$

(d)  $\int 3 + \frac{1}{x} = 3x + \frac{1}{x} + c$



$$(e) \frac{x}{x^2-4} + \frac{2}{x-2} = \frac{x}{(x+2)(x-2)} + \frac{2}{x-2}$$

$$= \frac{x}{(x+2)(x-2)} + \frac{2(x+2)}{(x+2)(x-2)} = \frac{x+2(x+2)}{(x+2)(x-2)}$$

$$= \frac{x+2x+4}{(x+2)(x-2)} = \frac{3x+4}{(x+2)(x-2)} = \frac{3x+4}{x^2-4}$$

$$(f) \frac{10}{100} \times \$979 = \$97.90$$

$$\begin{aligned} \text{Original Price} &= \$979 - 97.90 \\ &= \$881.10 \end{aligned}$$