

14-1-2024

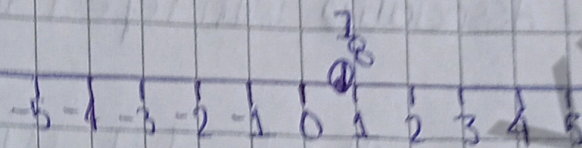
Notes

Unit 1

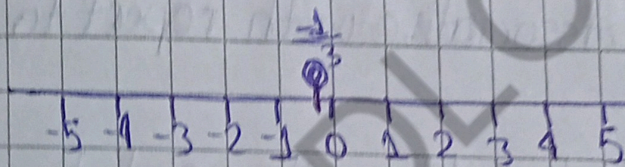
Ex: 1.1

Q1 Represent each number on the number line

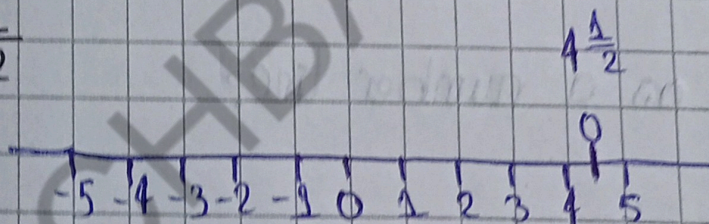
i)  $\frac{7}{8}$



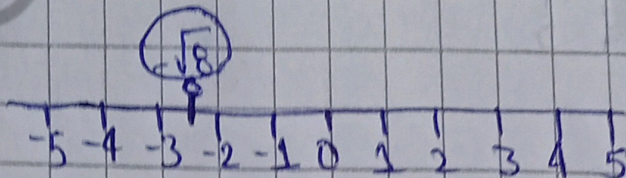
ii)  $-\frac{1}{3}$



iii)  $4\frac{1}{2}$



iv)  $-\sqrt{8}$





Q2 Identify the property that justifies:

i)  $1 \times (y-2) = y-2$  = Distributive with respect to subtraction.

ii)  $(0.2)5 = 1$  = Closure with respect to Multiplication.

iii)  $(x+2)+y = y+(x+2)$  = Associative with respect to Addition.

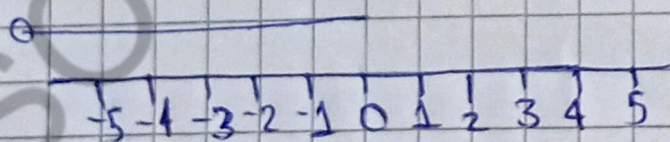
iv)  $-(3b)+(3b) = 0$  = Inverse with respect to Addition.

v)  $(x+5)-1 = x+(5-1)$  = Associative with respect to Addition.

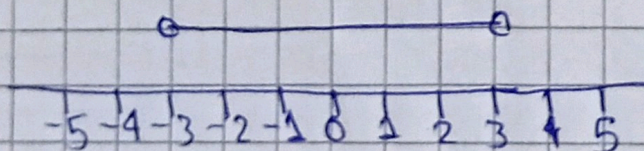
vi)  $-3(2-y) = -6+3y$  = distributive with respect to subtraction.

Q3 Represent the following on a number line?

i)  $x < 0$

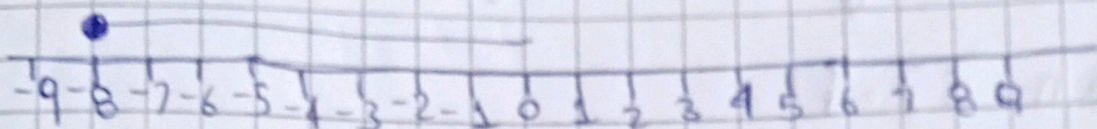


ii)  $-3 < x < 3$

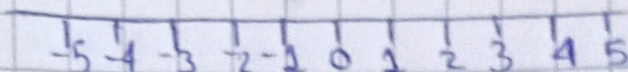




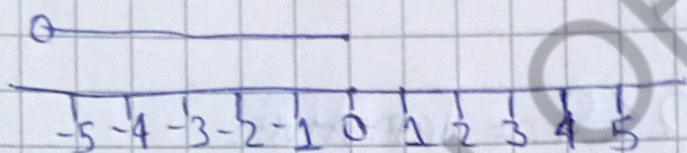
iii)  $x \geq -8$



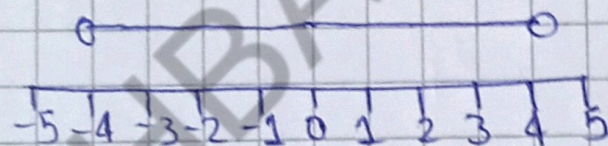
iv)  $x > 0$



v)  $x < -3$



vi)  $-4 < x \leq 4$



Q4 Identify the properties of equality and inequality of real numbers that justifies the statement:

i)  $a = a$  = Reflexive

ii) If  $x + 2 = y$  and  $y = 2x - 3$  then  $x + 2 = 2x - 3$  = Transitive



iii)  $2x + 3 = y$  then  $y = 2x + 3 =$  Symmetric.

iv)  $3 < 4$  then  $-3 > -4$

v)  $2y + 2w = p$  and  $p = 50$  then  $2y + 2w = 50 =$  Cancellation w.r.t addition.

vi)  $x + 4 > y + 4$ , then  $x > y =$  Cancellation w.r.t addition.

vii)  $2 < 5$  and  $5 < 9$ , then  $2 < 9 =$  Transitive.

viii)  $-18 < -16$  then  $9 > 8$