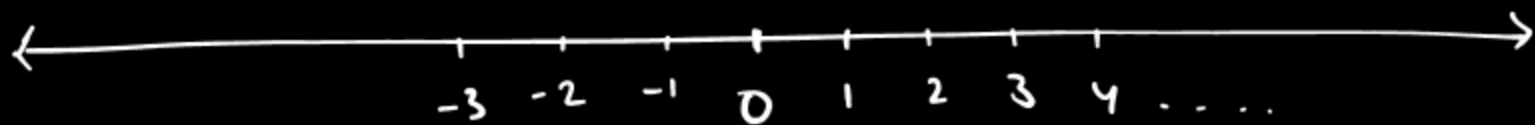


Negative Numbers

Grade 4(+)

27/Mon.
Negative numbers

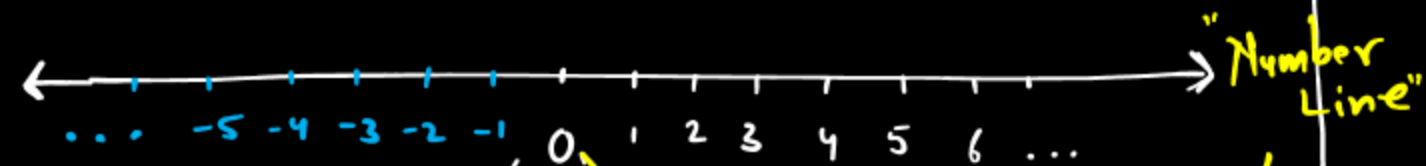
-1, -2, -3, -4, -5, ..., -∞
→



For negative numbers: or for numbers with
negative sign. \Rightarrow Bigger the number, smaller is its value.
and vice versa.

ex: -3 is smaller than -1
-100 is smaller than -3

← line →



Negative numbers

Positive numbers (Natural Numbers)

Zero is Not a positive number
and also
Zero is Not a negative number

Natural numbers: They are counting number.

Natural numbers: $[1, 2, 3, 4, 5, \dots, \infty]$

Whole number: $[0, 1, 2, 3, 4, 5, \dots, \infty]$

Integer: (whole number + all negative numbers) =

$$\frac{13}{5} \times \frac{15}{7} = \frac{13 \times 15}{5 \times 7} = \frac{13 \times 3}{1 \times 7} = \frac{39}{7}$$

$$\frac{12}{36} = \frac{3 \times 4}{9 \times 4} = \frac{9}{27} = \frac{1}{3}$$

$$\frac{5}{9} \times \frac{27}{4} = \frac{5 \times 27}{9 \times 4} = \frac{15}{4}$$

$[-\infty, \dots, -3, -2, -1, 0, 1, 2, 3, \dots, \infty]$

$$-\underline{7} + 5 = -\underline{2}$$

$$+\underline{9} - \underline{13} = -4$$

$$\left(8\frac{5}{9}\right) \times \left(5\frac{2}{3}\right) =$$

$$\frac{77}{9} \times \frac{17}{3} = \frac{77 \times 17}{9 \times 3} = \frac{1309}{27}$$

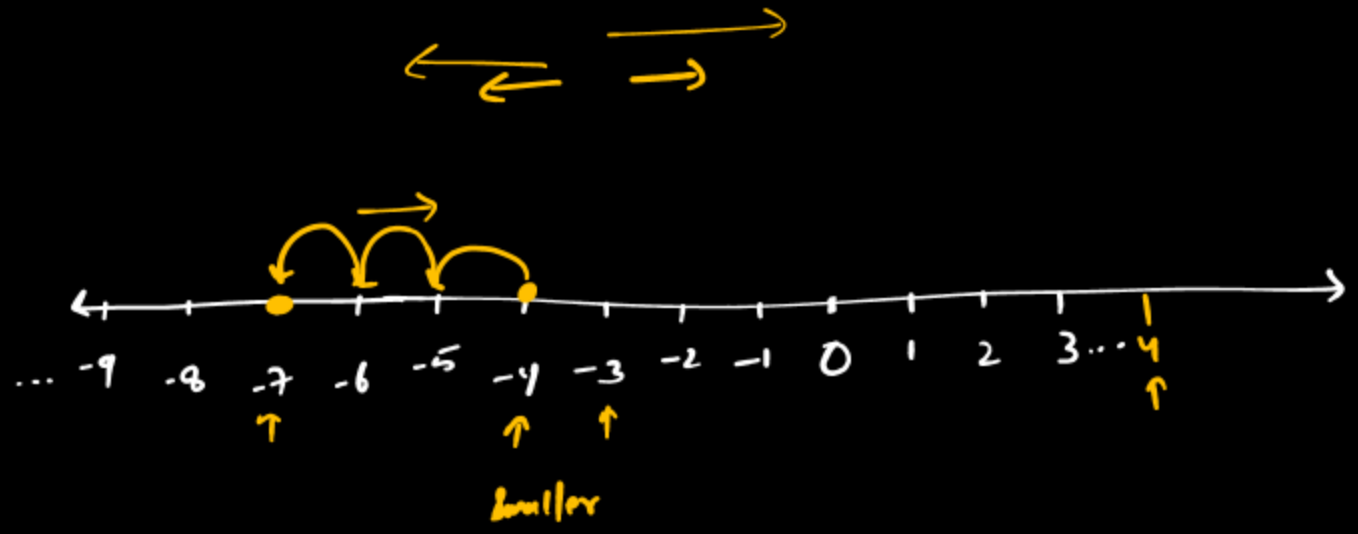
$$\begin{array}{r} 77 \\ \times 17 \\ \hline \end{array}$$

$$77 \times 17$$

$$\begin{array}{r} 77 \times (10 + 7) = 770 + 539 \\ \hline = 1309 \end{array}$$

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-4 = 3 =



Addition and Subtraction of negative number.

- -ve / -ve \Rightarrow Add and put negative sign. ||
(when both the nos. are negative)
eg. $-1 - 2 = -3$
 $-4 - 9 = -13$
 $-14 - 1 = -20$

$$2 + 3 = 5$$

- -ve / +ve } \Rightarrow We subtract and put the sign of the bigger number.
+ve / -ve }

eg. (i) $-7 + 9 = \underline{+2}$ or $\underline{2}$
(ii) $-6 + 2 = \underline{-4}$
(iii) $12 - 19 = -7$

Negative (<u>-ve</u>)
Positive (<u>+ve</u>)
$(-)$ \Rightarrow <u>minus</u>
$(+)$ \Rightarrow <u>plus</u>

157. Q. $\Rightarrow \underline{+13 + 19} = \underline{32}$

$\Rightarrow \underline{20 - 25} = \underline{-5}$

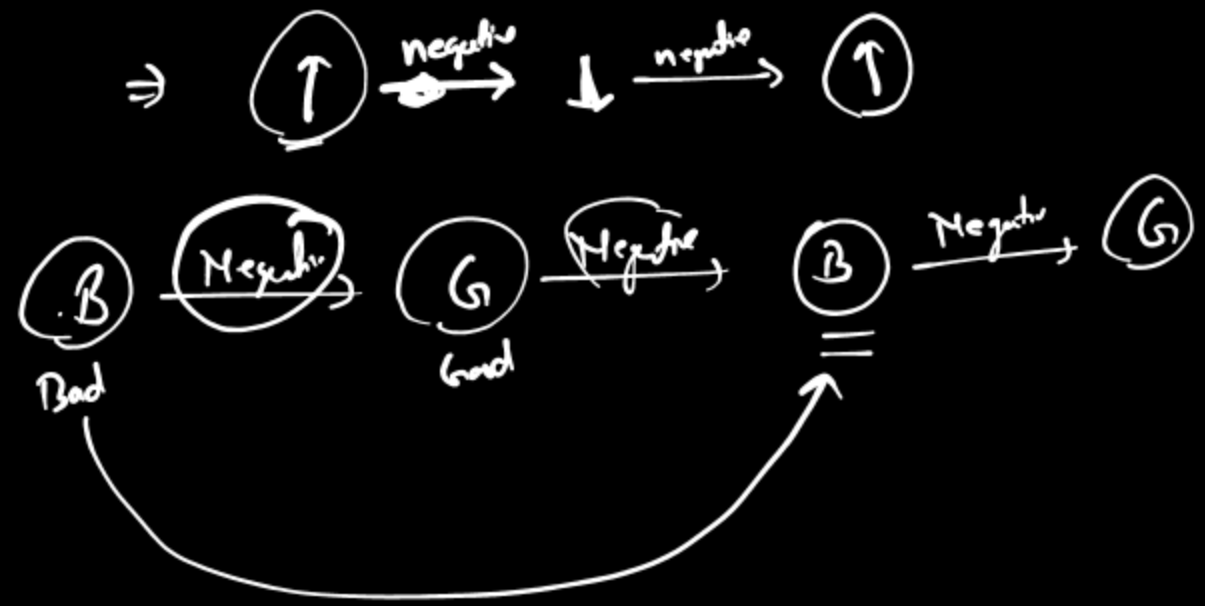
$\Rightarrow \underline{-46 - 44} = \underline{-90}$

$\Rightarrow \underline{-43 + 64} = \underline{+21 \text{ or } 21}$

$\Rightarrow \underline{-13 + 9} = \underline{-4}$

Multiplication & Division of negative numbers

- $\begin{matrix} +ve / +ve \\ -ve / -ve \end{matrix} \Rightarrow$ Multiply (or Divide) and use positive (+ve) sign only.
eg (i) $3 \times 4 = 12$
 $(-3) \times (-4) = 12$
 $(-3) \times (-4) \times (-2) =$
(ii) $24 \div 3 = 8$
(iii) $(-24) \div (-3) = 8$



the nos. &

● $\begin{matrix} +ve / -ve \\ -ve / +ve \end{matrix} \Rightarrow$ Multiply (or divide) \downarrow use negative sign (-).

eg. (i) $\underline{3 \times (-4)} = -12$

(ii) $(-10) \times 12 = \underline{\underline{-120}}$

(iii) $(-24) \div 3 = -8$

(iv) $36 \div (-4) = -9$

$\boxed{-20}$

Q11

Rational Numbers

Irrational numbers

Real numbers

Imaginary numbe.

Complex numbers

Q. (i) $\underline{12} + \underline{2} - 13$

$\Rightarrow 14 - 13$

$\Rightarrow \underline{\underline{1}}$

Rule:

DMAS \Rightarrow Division Multiplication Addition Subtraction

eg (i) $12 + \underline{2 \times 4} - 3$

$\Rightarrow \underline{12} + \underline{8} - 3$

$\Rightarrow 20 - 3$

$\Rightarrow \underline{\underline{17}}$

