

A large, stylized logo for 'ARJUNA NEET 2026'. It features a golden shield-like shape with two red crosses on top. The word 'ARJUNA' is in large, bold, white letters with a gold outline. Below it, 'NEET 2026' is written in white on a black banner.

**PHYSICS**

**Mathematical Tools**

**Lecture – 01**

**By – PROFESSOR**





# Topics *to be covered*

- 1) Introduction ✓
- 2) Before Starting ✓
- 3) Common Kidnapping ✓
- 4)  $+$   $-$   $\times$   $\div$  ✓
- 5) LCM ✓
- 6) Fractions and Decimals ✓



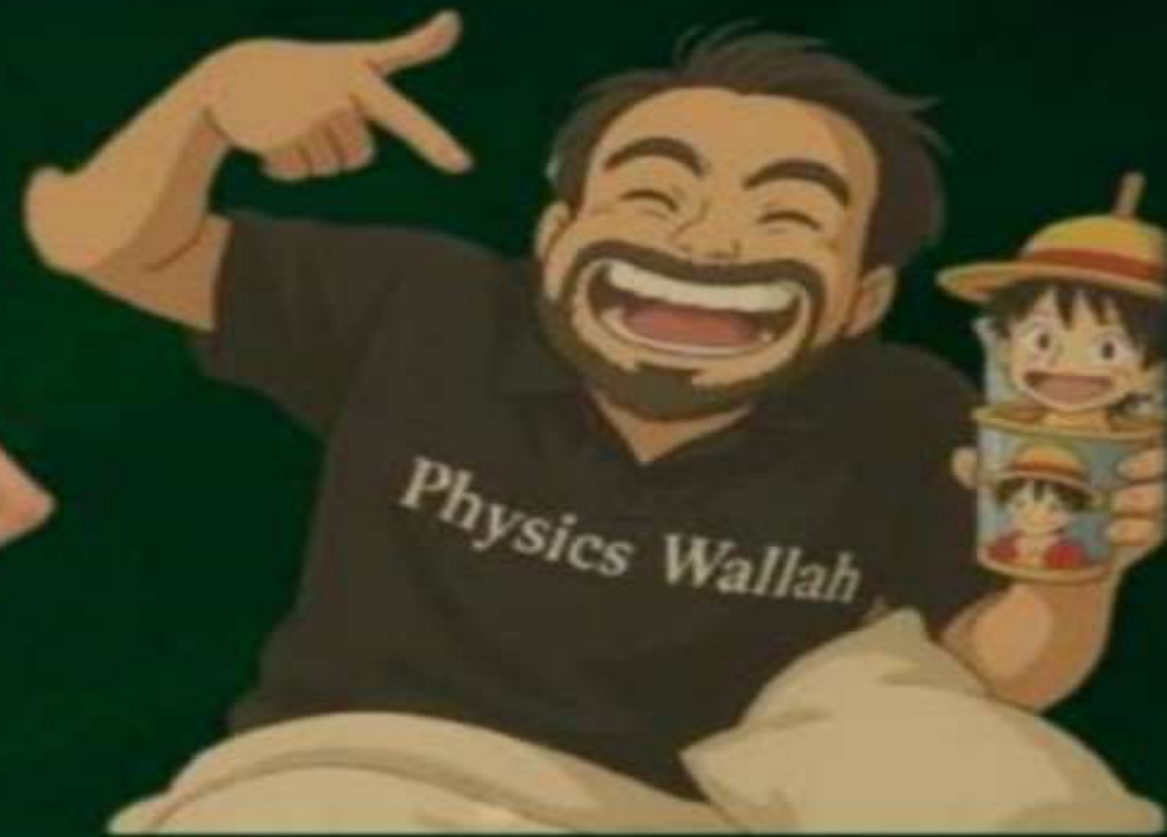
## Introduction





# Who is Brofessor

Masti-Care





## Why is Physics tough?



Maths Weak Hai  
Formula Yaad nahi hota  
Questions Galat hote hai  
Silly Mistake hoti hai  
Language samaj ni ati

Physics Wallah

🤪 *Physics = Math + Confusion - Sleep* 🤪





## Composition of Physics



40% - Maths

20% - Language

20% - Ratta

20% - Concept



# Syllabus of Physics



Basic Maths & Vectors — 20 days

Mechanics

- Kinematics
- Force
- Circle
- Work, Energy Power
- Collision
- Rotational Motion

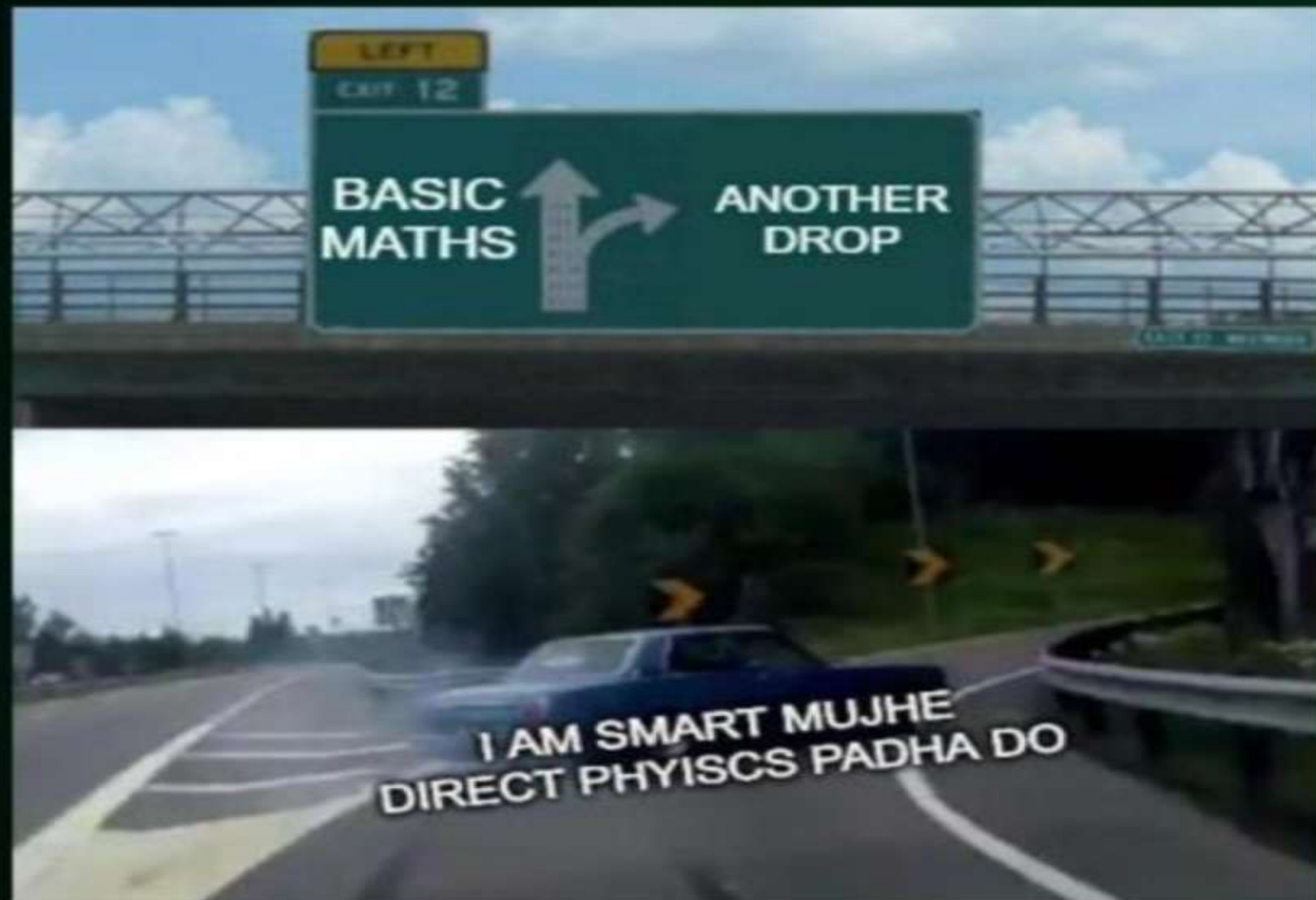
- Solid & Fluids
- Gravitation
- Thermal Properties  
KTG ... TD
- Oscillation
- Waves





## Maths Level-1







# Tables



|                    |                    |                    |                    |                    |
|--------------------|--------------------|--------------------|--------------------|--------------------|
| $1 \times 1 = 1$   | $2 \times 1 = 2$   | $3 \times 1 = 3$   | $4 \times 1 = 4$   | $5 \times 1 = 5$   |
| $1 \times 2 = 2$   | $2 \times 2 = 4$   | $3 \times 2 = 6$   | $4 \times 2 = 8$   | $5 \times 2 = 10$  |
| $1 \times 3 = 3$   | $2 \times 3 = 6$   | $3 \times 3 = 9$   | $4 \times 3 = 12$  | $5 \times 3 = 15$  |
| $1 \times 4 = 4$   | $2 \times 4 = 8$   | $3 \times 4 = 12$  | $4 \times 4 = 16$  | $5 \times 4 = 20$  |
| $1 \times 5 = 5$   | $2 \times 5 = 10$  | $3 \times 5 = 15$  | $4 \times 5 = 20$  | $5 \times 5 = 25$  |
| $1 \times 6 = 6$   | $2 \times 6 = 12$  | $3 \times 6 = 18$  | $4 \times 6 = 24$  | $5 \times 6 = 30$  |
| $1 \times 7 = 7$   | $2 \times 7 = 14$  | $3 \times 7 = 21$  | $4 \times 7 = 28$  | $5 \times 7 = 35$  |
| $1 \times 8 = 8$   | $2 \times 8 = 16$  | $3 \times 8 = 24$  | $4 \times 8 = 32$  | $5 \times 8 = 40$  |
| $1 \times 9 = 9$   | $2 \times 9 = 18$  | $3 \times 9 = 27$  | $4 \times 9 = 36$  | $5 \times 9 = 45$  |
| $1 \times 10 = 10$ | $2 \times 10 = 20$ | $3 \times 10 = 30$ | $4 \times 10 = 40$ | $5 \times 10 = 50$ |

|                    |                    |                    |                    |                      |
|--------------------|--------------------|--------------------|--------------------|----------------------|
| $6 \times 1 = 6$   | $7 \times 1 = 7$   | $8 \times 1 = 8$   | $9 \times 1 = 9$   | $10 \times 1 = 10$   |
| $6 \times 2 = 12$  | $7 \times 2 = 14$  | $8 \times 2 = 16$  | $9 \times 2 = 18$  | $10 \times 2 = 20$   |
| $6 \times 3 = 18$  | $7 \times 3 = 21$  | $8 \times 3 = 24$  | $9 \times 3 = 27$  | $10 \times 3 = 30$   |
| $6 \times 4 = 24$  | $7 \times 4 = 28$  | $8 \times 4 = 32$  | $9 \times 4 = 36$  | $10 \times 4 = 40$   |
| $6 \times 5 = 30$  | $7 \times 5 = 35$  | $8 \times 5 = 40$  | $9 \times 5 = 45$  | $10 \times 5 = 50$   |
| $6 \times 6 = 36$  | $7 \times 6 = 42$  | $8 \times 6 = 48$  | $9 \times 6 = 54$  | $10 \times 6 = 60$   |
| $6 \times 7 = 42$  | $7 \times 7 = 49$  | $8 \times 7 = 56$  | $9 \times 7 = 63$  | $10 \times 7 = 70$   |
| $6 \times 8 = 48$  | $7 \times 8 = 56$  | $8 \times 8 = 64$  | $9 \times 8 = 72$  | $10 \times 8 = 80$   |
| $6 \times 9 = 54$  | $7 \times 9 = 63$  | $8 \times 9 = 72$  | $9 \times 9 = 81$  | $10 \times 9 = 90$   |
| $6 \times 10 = 60$ | $7 \times 10 = 70$ | $8 \times 10 = 80$ | $9 \times 10 = 90$ | $10 \times 10 = 100$ |



# Tables



|                      |                      |                      |                      |                      |
|----------------------|----------------------|----------------------|----------------------|----------------------|
| $11 \times 1 = 11$   | $12 \times 1 = 12$   | $13 \times 1 = 13$   | $14 \times 1 = 14$   | $15 \times 1 = 15$   |
| $11 \times 2 = 22$   | $12 \times 2 = 24$   | $13 \times 2 = 26$   | $14 \times 2 = 28$   | $15 \times 2 = 30$   |
| $11 \times 3 = 33$   | $12 \times 3 = 36$   | $13 \times 3 = 39$   | $14 \times 3 = 42$   | $15 \times 3 = 45$   |
| $11 \times 4 = 44$   | $12 \times 4 = 48$   | $13 \times 4 = 52$   | $14 \times 4 = 56$   | $15 \times 4 = 60$   |
| $11 \times 5 = 55$   | $12 \times 5 = 60$   | $13 \times 5 = 65$   | $14 \times 5 = 70$   | $15 \times 5 = 75$   |
| $11 \times 6 = 66$   | $12 \times 6 = 72$   | $13 \times 6 = 78$   | $14 \times 6 = 84$   | $15 \times 6 = 90$   |
| $11 \times 7 = 77$   | $12 \times 7 = 84$   | $13 \times 7 = 91$   | $14 \times 7 = 98$   | $15 \times 7 = 105$  |
| $11 \times 8 = 88$   | $12 \times 8 = 96$   | $13 \times 8 = 104$  | $14 \times 8 = 112$  | $15 \times 8 = 120$  |
| $11 \times 9 = 99$   | $12 \times 9 = 108$  | $13 \times 9 = 117$  | $14 \times 9 = 126$  | $15 \times 9 = 135$  |
| $11 \times 10 = 110$ | $12 \times 10 = 120$ | $13 \times 10 = 130$ | $14 \times 10 = 140$ | $15 \times 10 = 150$ |

|                      |                      |                      |                      |                      |
|----------------------|----------------------|----------------------|----------------------|----------------------|
| $16 \times 1 = 16$   | $17 \times 1 = 17$   | $18 \times 1 = 18$   | $19 \times 1 = 19$   | $20 \times 1 = 20$   |
| $16 \times 2 = 32$   | $17 \times 2 = 34$   | $18 \times 2 = 36$   | $19 \times 2 = 38$   | $20 \times 2 = 40$   |
| $16 \times 3 = 48$   | $17 \times 3 = 51$   | $18 \times 3 = 54$   | $19 \times 3 = 57$   | $20 \times 3 = 60$   |
| $16 \times 4 = 64$   | $17 \times 4 = 68$   | $18 \times 4 = 72$   | $19 \times 4 = 76$   | $20 \times 4 = 80$   |
| $16 \times 5 = 80$   | $17 \times 5 = 85$   | $18 \times 5 = 90$   | $19 \times 5 = 95$   | $20 \times 5 = 100$  |
| $16 \times 6 = 96$   | $17 \times 6 = 102$  | $18 \times 6 = 108$  | $19 \times 6 = 114$  | $20 \times 6 = 120$  |
| $16 \times 7 = 112$  | $17 \times 7 = 119$  | $18 \times 7 = 126$  | $19 \times 7 = 133$  | $20 \times 7 = 140$  |
| $16 \times 8 = 128$  | $17 \times 8 = 136$  | $18 \times 8 = 144$  | $19 \times 8 = 152$  | $20 \times 8 = 160$  |
| $16 \times 9 = 144$  | $17 \times 9 = 153$  | $18 \times 9 = 162$  | $19 \times 9 = 171$  | $20 \times 9 = 180$  |
| $16 \times 10 = 160$ | $17 \times 10 = 170$ | $18 \times 10 = 180$ | $19 \times 10 = 190$ | $20 \times 10 = 200$ |



# Common Kidnapping

Difficulty Level : Easy



$$\underline{30} \times \underline{2} + \underline{30} =$$
$$\underline{30} (\underline{2} + \underline{1}) = 30 \times 3 = 90 //$$

$$\underline{188} \times \underline{9} + \overset{\textcircled{3}22}{\underline{66}} \times \textcircled{3} =$$
$$\underline{9} (188 + 22)$$
$$\underline{9} \times (210) = \underline{1890}$$

$$(\underline{10}^2 + \underline{70}^2) = 10^2 (\underline{1}^2 + \underline{7}^2) = 100 \times (1 + 49)$$
$$= 100 \times 50 = \underline{\underline{5000}}$$



# Common Kidnapping

Difficulty Level : Hard



If  $x = R\sqrt{3}$  then value of

$$\sqrt{(x^2 + R^2)} =$$

~~$$\sqrt{(R\sqrt{3})^2 + R^2}$$~~

~~$$\sqrt{(R\sqrt{3} \times R\sqrt{3}) + R^2}$$~~

~~$$\sqrt{R^2 3 + R^2}$$~~

~~$$\sqrt{4R^2}$$~~

~~$$= 2R$$~~

School ✓

~~NEET~~

$$x = \sqrt{3} R$$

$$\sqrt{x^2 + R^2}$$

$$R \sqrt{4} = \underline{\underline{2R}}$$



# Common Kidnapping

Difficulty Level : BROFESSOR



If  $x = \sqrt{7R^3}$  then value of

$$\sqrt[3]{(x^2 + R^3)} =$$

$$x = \sqrt{7R^3}$$

$$x^2 = (\sqrt{7R^3})^2$$

$$x^2 = 7R^3$$

$$\sqrt[3]{7R^3 + R^3}$$

$$\sqrt[3]{8R^3}$$

$$\sqrt[3]{\cancel{2} \times \cancel{2} \times \textcircled{2} \times \cancel{R} \times \cancel{R} \times \textcircled{R}}$$
$$= \underline{\underline{2R}}$$

Challenge  
Comment



$$\sqrt[3]{8} = \sqrt[3]{\cancel{2 \times 2 \times 2}} = 2$$

$$\sqrt[3]{27} = \sqrt[3]{\cancel{3 \times 3 \times 3}} = 3$$

$$\sqrt[3]{1000} = \sqrt[3]{\cancel{10 \times 10 \times 10}} = 10$$

$$\begin{aligned} \sqrt[3]{27000} &= \sqrt[3]{27 \times 1000} \\ &= \sqrt[3]{\cancel{3 \times 3 \times 3} \times \cancel{10 \times 10 \times 10}} = 3 \times 10 = 30 \end{aligned}$$



# **+ - x ÷ of negative numbers**



$$\textcircled{2} + 8 = 10$$

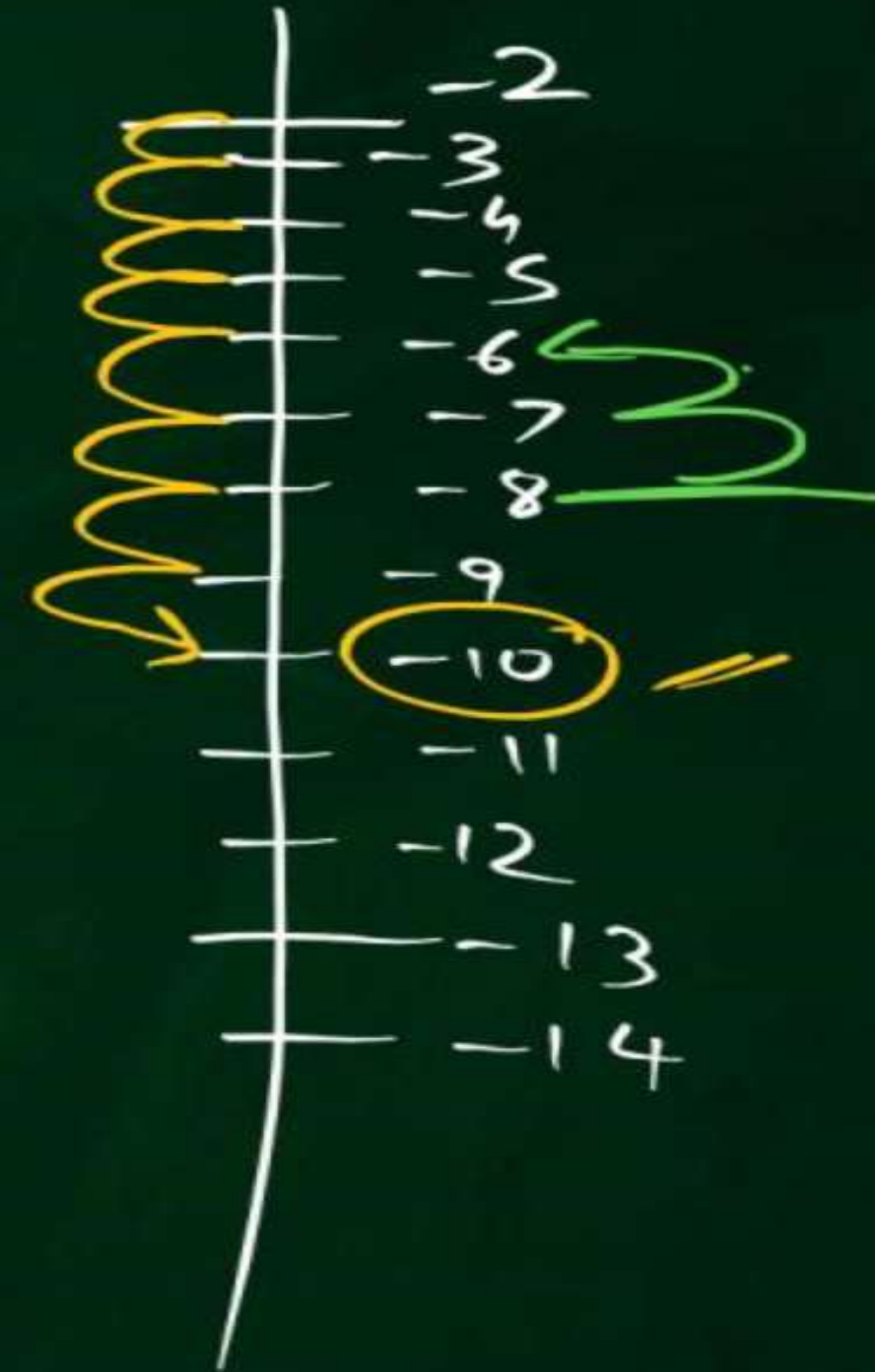
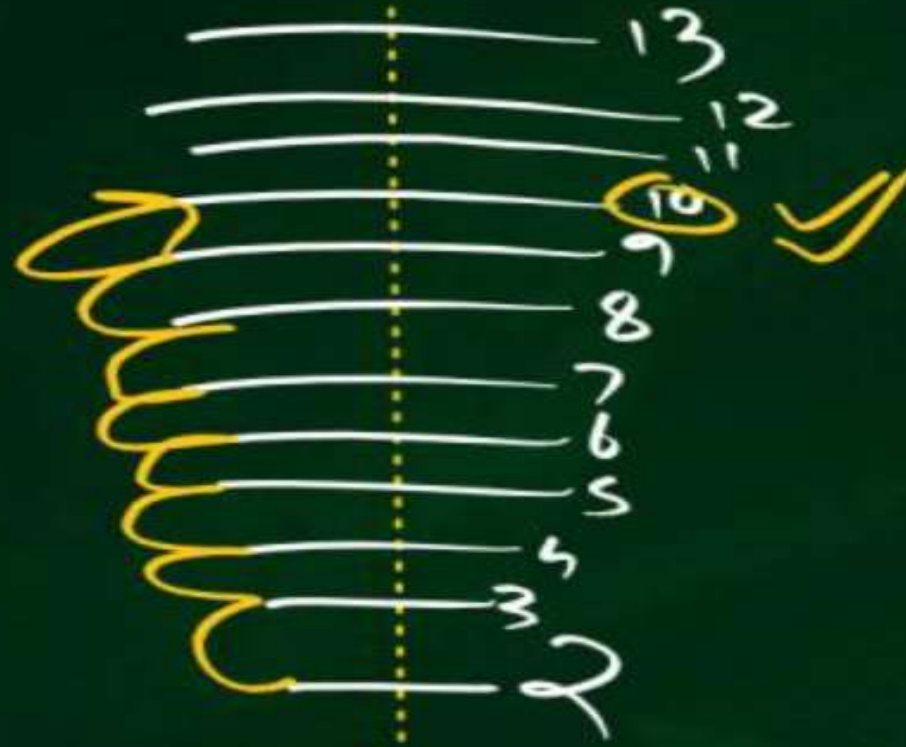
$$\textcircled{-2} - 8 = -10$$

$$8 - 2 = 6$$

$$2 - 8 = -6$$

$$-2 + 8 = 6$$

$$-8 + 2 = -6$$





## **+ - x ÷ of negative numbers**



$$2 \times 8 = 16$$

$$+2 \times +8 = 16$$

$$8 \times -2 = -16$$

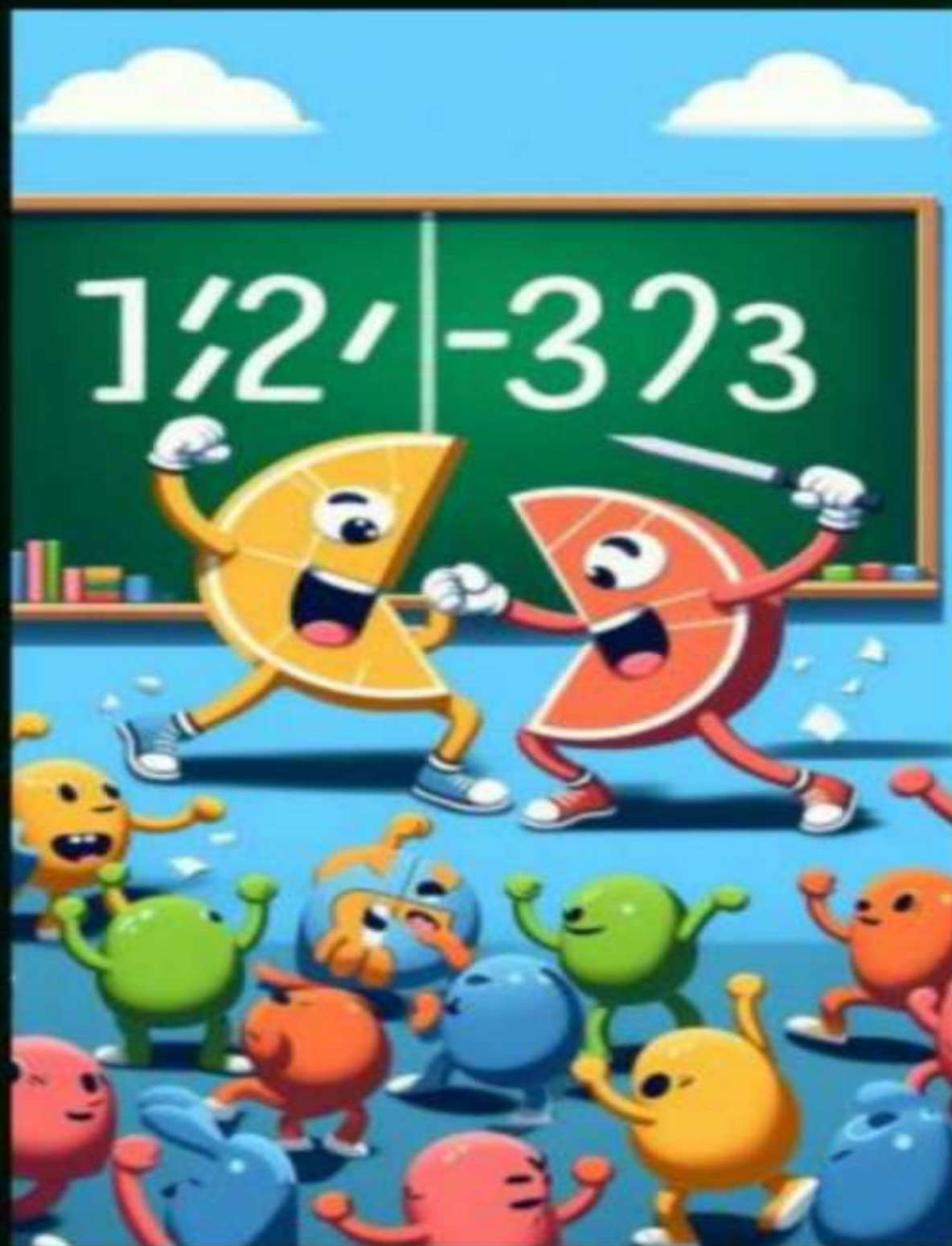
$$2 \times -8 = -16$$

$$-2 \times 8 = -16$$

$$-8 \times 2 = -16$$



# Fractions to Decimals



$$\frac{1}{2} = 0.5$$

$$\frac{1}{3} = 0.333$$

$$\frac{2}{3} = 0.66 = 0.67$$

$$\frac{1}{4} = 0.25$$

$$\frac{3}{4} = 0.75$$

$$\frac{1}{5} = 0.2$$

$$\frac{2}{5} = 0.4$$

$$\frac{3}{5} = 0.6$$

$$\frac{4}{5} = 0.8$$

$$\frac{1}{6} =$$

$$\frac{5}{6} =$$

HW → 2

$$\frac{1}{7} =$$

$$\frac{2}{7} =$$

$$\frac{3}{7} =$$

$$\frac{4}{7} =$$

$$\frac{1}{8} =$$

$$\frac{3}{8} =$$

$$\frac{5}{8} =$$

$$\frac{7}{8} =$$

$$\frac{1}{9} = 0.111111$$

$$\frac{2}{9} = 0.2222$$

$$\frac{4}{9} = 0.4444$$

$$\frac{5}{9} = 0.5555$$



$$\frac{8}{3} = 2 + \frac{2}{3} = \underline{\underline{2.66}}$$

$$\begin{array}{r} 3 \overline{) 8} \text{ (2)} \\ \underline{6} \\ 2 \end{array}$$

$$\frac{55}{3} = 18.333 \checkmark$$

$$\frac{55}{3} = 18 + \frac{1}{3} = \underline{\underline{18.33}}$$

$$\begin{array}{r} 3 \overline{) 55} \text{ (18)} \\ \underline{54} \downarrow \\ 1 \end{array}$$





$$\frac{33}{5} = 6.6 \quad \checkmark$$

PUPPY, OP

$$\frac{124}{5} = \underline{24.8} \quad \checkmark$$

$$\frac{635}{5} = \underline{127} \quad \cancel{\phi}$$

$$\boxed{\frac{124}{5} \times \frac{2}{2} = \frac{248}{10} = 24.8}$$



$$\frac{20}{9} = 2.2222 \checkmark$$

$$\frac{100}{9} = 11.1111$$

$$\frac{11}{9} = 1.2222$$

$$9 \sqrt{6886} \left[ \underline{\underline{765.1111}} \right]$$

$$\begin{array}{r} 63 \\ \hline 58 \\ 54 \\ \hline 46 \\ 45 \\ \hline \textcircled{1} \end{array}$$



# Equivalent Fractions



$$\left( \frac{1}{2} = \frac{4}{8} \right)$$

Diagram showing the conversion of  $\frac{1}{2}$  to  $\frac{4}{8}$  by multiplying both numerator and denominator by 4.

$$\frac{7}{11} = \frac{77}{121}$$

Diagram showing the conversion of  $\frac{7}{11}$  to  $\frac{77}{121}$  by multiplying both numerator and denominator by 11.

$$\frac{1}{4} = \frac{3}{12}$$

Diagram showing the conversion of  $\frac{1}{4}$  to  $\frac{3}{12}$  by multiplying both numerator and denominator by 3.

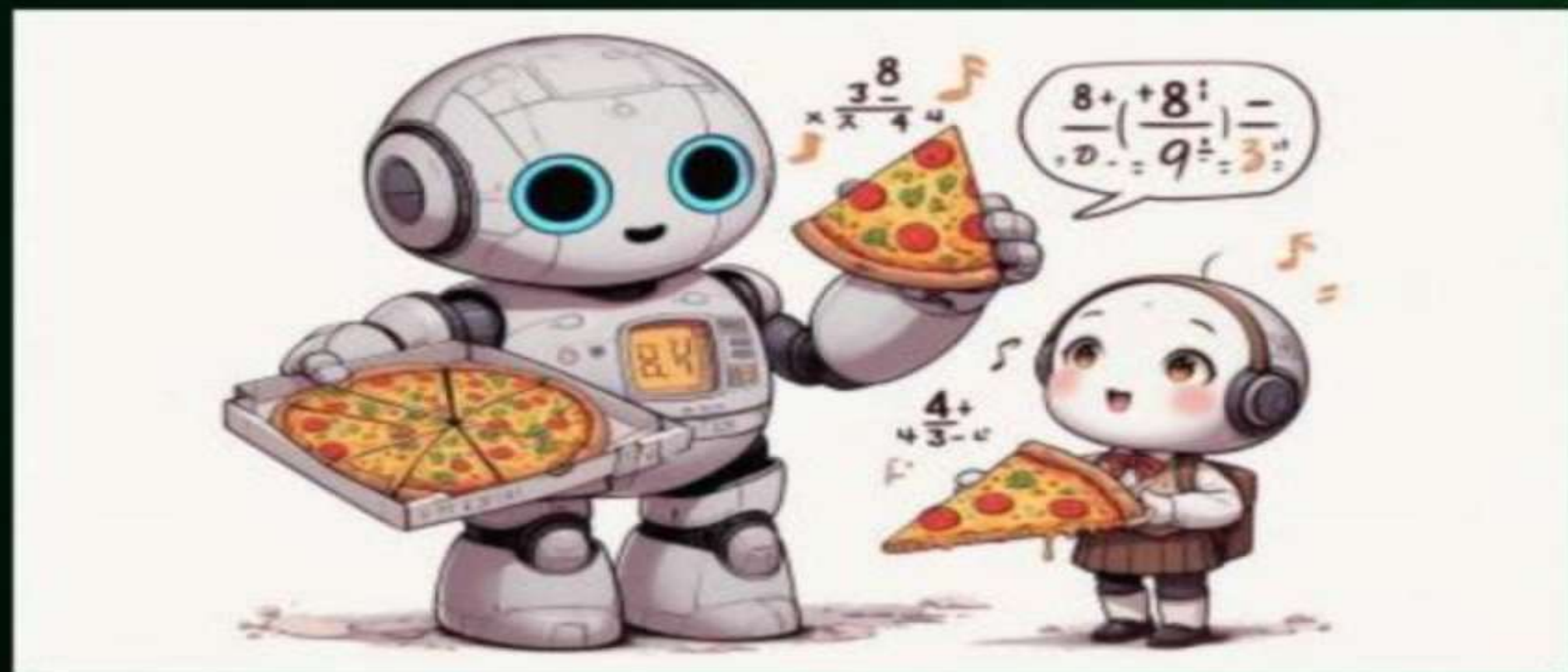
$$\frac{3}{7} = \frac{27}{63}$$

Diagram showing the conversion of  $\frac{3}{7}$  to  $\frac{27}{63}$  by multiplying both numerator and denominator by 9.

$$\frac{2}{3} = \frac{\quad}{12}$$

$$\frac{1}{9} = \frac{\quad}{63}$$

HW



- $\frac{2}{3}$
- (A)  $\frac{3}{4}$  (B) 0.33 (C)  ~~$\frac{4}{6}$~~  (D) ~~None~~



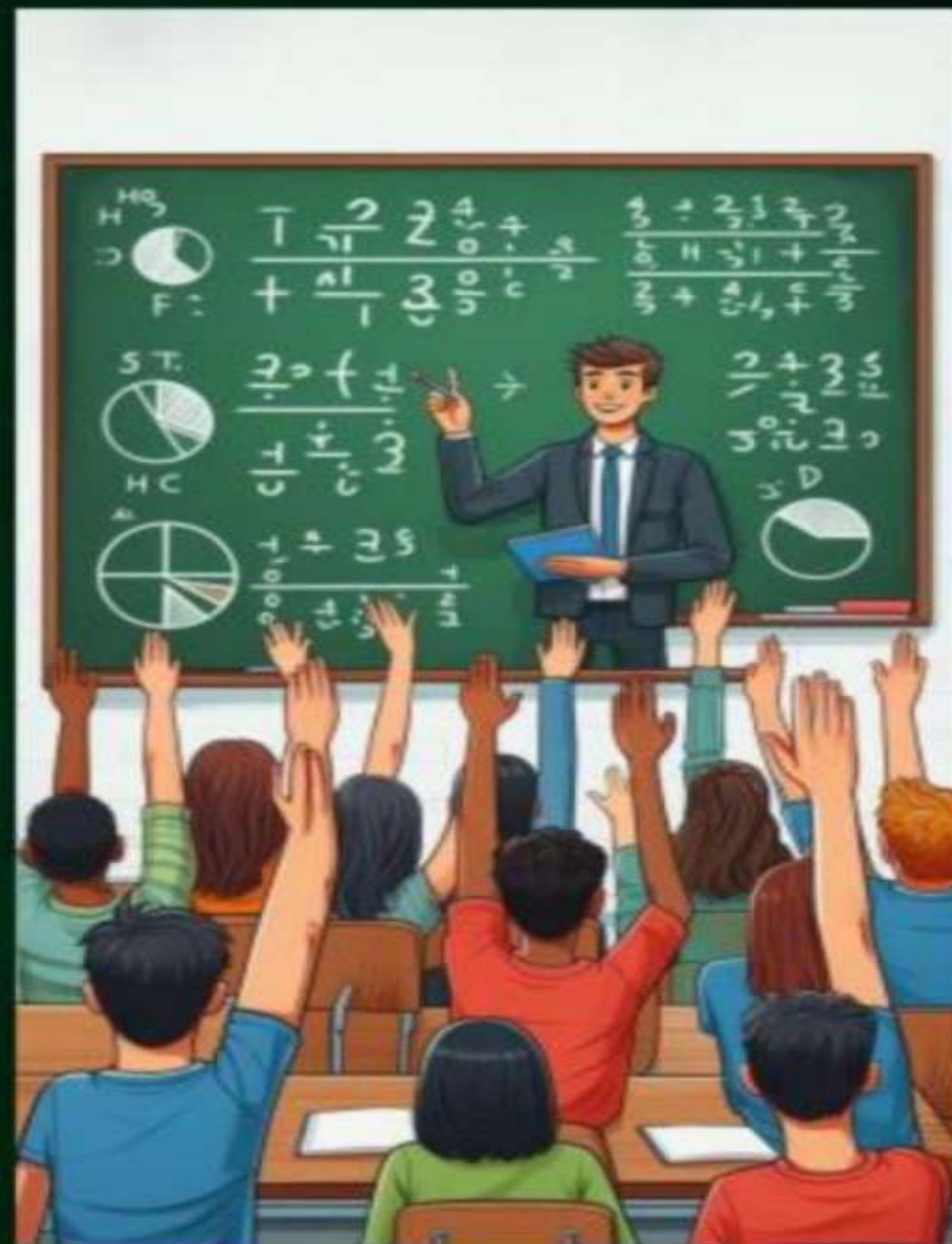
# Fractions Addition, Subtraction Rules



Denominator same

$$\frac{1}{3} + \frac{2}{5} = \frac{3}{8} = \left(\frac{5}{15}\right) + \left(\frac{6}{15}\right) = \frac{11}{15}$$

$$\begin{array}{r} \frac{1}{3} \xrightarrow{\times 5} \frac{5}{15} \\ \frac{2}{5} \xrightarrow{\times 3} \frac{6}{15} \end{array}$$





# Fractions Addition - DORA



$$\frac{1}{2} + \frac{1}{8} =$$

LCM = 8

$$\frac{1}{2} \xrightarrow{\times 4} \frac{4}{8}$$

$$\frac{4}{8} + \frac{1}{8} = \frac{5}{8}$$

$$\frac{3}{7} - \frac{1}{9} =$$

LCM = 63

$$\frac{3}{7} \xrightarrow{\times 9} \frac{27}{63}$$

$$\frac{1}{9} \xrightarrow{\times 7} \frac{7}{63}$$

$$\frac{27}{63} - \frac{7}{63} = \frac{20}{63}$$

$$\frac{1}{2} + \frac{1}{4} =$$

$$\checkmark \frac{7}{11} - \frac{2}{121} =$$

$$\frac{2}{3} + \frac{1}{4} =$$



## PUPPY Method



$$\frac{a}{b} + \frac{c}{d}$$

$$\frac{ad+bc}{bd}$$

$$\frac{1}{2} + \frac{3}{8}$$

$$= \frac{8+6}{16} = \frac{14}{16} = \frac{7}{8}$$

$$\frac{1}{2} \left( \frac{1+3}{1+4} \right) = \frac{1}{2} \left( \frac{4+3}{4} \right) = \frac{7}{8}$$



# Fractions Addition – PUPPY



$$\frac{1}{2} + \frac{1}{8} =$$

$$\frac{3}{7} - \frac{1}{9} =$$

$$\frac{1}{2} + \frac{1}{4} =$$

$$\boxed{\frac{7}{11} - \frac{2}{121} =}$$

$$\checkmark \frac{2}{3} + \frac{1}{4} = \frac{8+3}{12}$$

$$\frac{7}{11} - \frac{2}{121} = \frac{7 \times 121 - 2 \times 11}{11 \times 121}$$

$$\frac{1}{11} \left( \frac{7}{1} - \frac{2}{11} \right) = \frac{1}{11} \times \left( \frac{7 \cdot 7 - 2}{11} \right) = \frac{75}{121}$$

☒ **A**  $\frac{11}{12}$

☐ **B**  $\frac{12}{11}$

☐ **C**  $\frac{9}{12}$

☐ **D**  $\frac{3}{12}$

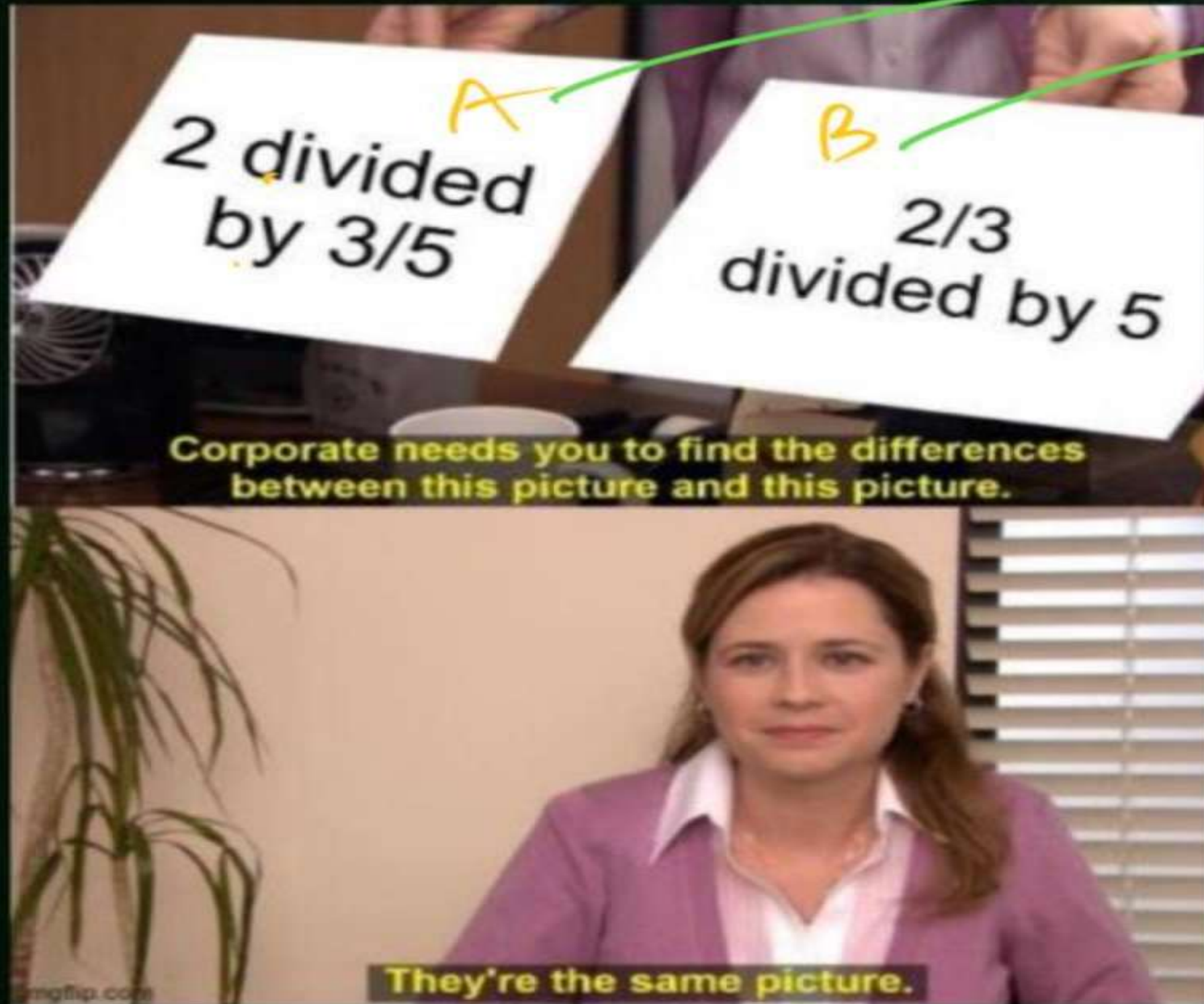




**D**  $\frac{1}{4}$



# Fractions Division, Multiplication Rules



P

$$\frac{2}{15}$$

Q

$$\frac{10}{3}$$

$$\left( \begin{aligned} 2 \div \frac{3}{5} &= 2 \times \frac{5}{3} = \frac{10}{3} \\ \frac{2}{3} \div 5 &= \frac{2}{3} \times \frac{1}{5} = \frac{2}{15} \end{aligned} \right)$$



## QUESTION

Difficulty Level : Medium



Value of  $x$  in  $3x/5 = 2$  and  $5x = 2/3$  is....

- A**  $10/3, 10/3$
- B**  $2/15, 2/15$
- C**  $10/3, 2/15$
- D**  $2/15, 10/3$

$$\begin{array}{l} \frac{3}{5}x = 2 \\ x = \frac{2 \times 5}{3} = \frac{10}{3} \end{array}$$

$$\begin{array}{l} 5x = \frac{2}{3} \\ x = \frac{2}{3 \times 5} = \frac{2}{15} \end{array}$$



$$0.01$$

$$+ 0.733 = 0.743$$

---

$$8.3 + 0.13 =$$

$$8.43$$



# Decimals Addition, Subtraction Rules

Difficulty Level : Easy



$$0.2 + 0.3 =$$

$$\begin{array}{r} 0.2 \\ + 0.3 \\ \hline 0.5 \end{array} \checkmark$$

$$0.2 - 0.03 =$$

$$\begin{array}{r} 0.20 \\ - 0.03 \\ \hline 0.17 \end{array}$$

$$22.3 + 0.23 =$$

$$\begin{array}{r} 22.30 \\ + 0.23 \\ \hline 22.53 \end{array}$$

$$8.27 - 1.99 =$$

$$\begin{array}{r} 7 \quad 11 \\ \cancel{8}.\cancel{2}7 \\ - 1.99 \\ \hline 6.28 \end{array}$$

A

B

C

D



# Decimals Multiply, Division Rules

Difficulty Level : Easy



$$0.\underline{2} \times 0.\underline{3} = \underline{0.06}$$

$$0.\underline{2} \times 0.0\underline{3} = \underline{0.006}$$

$$0.2 / 0.3 = \frac{0.2}{0.3} = \frac{2}{3}$$

$$0.2 / 0.03 = \frac{0.20}{0.03}$$

$$\frac{20}{3} =$$

A

B

C

D

$$\begin{array}{r} 0.12 \times 0.005 = \frac{6}{10000} \\ \hline 0.0006 \end{array}$$

$$0.\underline{12} \times 0.\underline{005} = \underline{0.0006}$$



$$\frac{99\cancel{9}}{10} \times \frac{0\cancel{5}}{10} = \frac{4995}{100} = 49.95$$

$$99.\underline{9} \times 0.\underline{5} = 49.\underline{9}\underline{5}$$





$$0.\underline{02} \times 0.\underline{4}$$

$$\frac{2}{100} \times \frac{4}{10} = \frac{8}{1000} = 0.008 \checkmark$$

$$\frac{99.900}{0.528} = \frac{99900}{528} \checkmark$$

$$\frac{0.30}{0.04} = \frac{\cancel{30}}{\cancel{4}} = \frac{\cancel{15}}{\cancel{2}} = \underline{\underline{7.5}}$$



$$\frac{6.9}{1.44} = \frac{\cancel{690}}{\cancel{144}} = \frac{\cancel{230}}{\cancel{48}} = \frac{115}{24} \checkmark$$

## PUPPY Points - 1



**Common Kidnapping**  $4 + 8 = 4(1+2) = 4 \times 3 = 12$

**LCM** = Le Common kr multiply  $6, 9 = 3(2, 3) = 18 //$

**Equivalent Fractions**  $\frac{2}{3} \xrightarrow{\times 8} \frac{16}{24}$

**Fractions Addition - PUPPY**

$$\frac{1}{11} - \frac{8}{99} = \frac{1}{11} \left( 1 - \frac{8}{9} \right) = \frac{1}{11} \times \frac{1}{9} = \frac{1}{99}$$

**Fractions Division, Multiplication Rules**  $2 \div \frac{3}{5} \quad \& \quad \frac{2}{3} \div 5$

**Decimals Addition, Subtraction Rules**

**Decimals Multiply, Division Rules**

Point Ghing

Shift Karado

$$2 \times \frac{5}{3} = \frac{10}{3} \quad | \quad \frac{2}{3} \times \frac{1}{5} = \frac{2}{15}$$

→ Point se Point Milao



# PUPPY Points -2



$$\frac{1}{2} = 0.5$$

$$\frac{1}{3} = 0.33$$

$$\frac{2}{3} = 0.66 = 0.67$$

$$\frac{1}{4} = 0.25$$

$$\frac{3}{4} = 0.75$$

$$\frac{1}{5} = 0.2$$

$$\frac{2}{5} = 0.4$$

$$\frac{3}{5} = 0.6$$

$$\frac{4}{5} = 0.8$$

$$\frac{1}{6} =$$

$$\frac{5}{6} =$$

$$\frac{1}{7} =$$

$$\frac{1}{8} =$$

$$\frac{1}{9} = 0.11$$

$$\frac{2}{9} = 0.22$$

$$\frac{4}{9} = 0.44$$

$$\frac{5}{9} = 0.55$$

|               |
|---------------|
| 12 x 1 = 12   |
| 12 x 2 = 24   |
| 12 x 3 = 36   |
| 12 x 4 = 48   |
| 12 x 5 = 60   |
| 12 x 6 = 72   |
| 12 x 7 = 84   |
| 12 x 8 = 96   |
| 12 x 9 = 108  |
| 12 x 10 = 120 |

|               |
|---------------|
| 13 x 1 = 13   |
| 13 x 2 = 26   |
| 13 x 3 = 39   |
| 13 x 4 = 52   |
| 13 x 5 = 65   |
| 13 x 6 = 78   |
| 13 x 7 = 91   |
| 13 x 8 = 104  |
| 13 x 9 = 117  |
| 13 x 10 = 130 |

|               |
|---------------|
| 14 x 1 = 14   |
| 14 x 2 = 28   |
| 14 x 3 = 42   |
| 14 x 4 = 56   |
| 14 x 5 = 70   |
| 14 x 6 = 84   |
| 14 x 7 = 98   |
| 14 x 8 = 112  |
| 14 x 9 = 126  |
| 14 x 10 = 140 |

|               |
|---------------|
| 15 x 1 = 15   |
| 15 x 2 = 30   |
| 15 x 3 = 45   |
| 15 x 4 = 60   |
| 15 x 5 = 75   |
| 15 x 6 = 90   |
| 15 x 7 = 105  |
| 15 x 8 = 120  |
| 15 x 9 = 135  |
| 15 x 10 = 150 |

|               |
|---------------|
| 16 x 1 = 16   |
| 16 x 2 = 32   |
| 16 x 3 = 48   |
| 16 x 4 = 64   |
| 16 x 5 = 80   |
| 16 x 6 = 96   |
| 16 x 7 = 112  |
| 16 x 8 = 128  |
| 16 x 9 = 144  |
| 16 x 10 = 160 |

|               |
|---------------|
| 17 x 1 = 17   |
| 17 x 2 = 34   |
| 17 x 3 = 51   |
| 17 x 4 = 68   |
| 17 x 5 = 85   |
| 17 x 6 = 102  |
| 17 x 7 = 119  |
| 17 x 8 = 136  |
| 17 x 9 = 153  |
| 17 x 10 = 170 |

|               |
|---------------|
| 18 x 1 = 18   |
| 18 x 2 = 36   |
| 18 x 3 = 54   |
| 18 x 4 = 72   |
| 18 x 5 = 90   |
| 18 x 6 = 108  |
| 18 x 7 = 126  |
| 18 x 8 = 144  |
| 18 x 9 = 162  |
| 18 x 10 = 180 |

|               |
|---------------|
| 19 x 1 = 19   |
| 19 x 2 = 38   |
| 19 x 3 = 57   |
| 19 x 4 = 76   |
| 19 x 5 = 95   |
| 19 x 6 = 114  |
| 19 x 7 = 133  |
| 19 x 8 = 152  |
| 19 x 9 = 171  |
| 19 x 10 = 190 |



**Thank You**