

MATEMÁTICA



Suma de fracciones propias, impropias y mixtas

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Objetivo de Aprendizaje:

MA06 OA 08

Resolver problemas rutinarios y no rutinarios que involucren adiciones y sustracciones de fracciones propias, impropias, números mixtos o decimales hasta la milésima.



Objetivo de la clase:

Sumar y restar fracciones Propias, impropias y mixtas

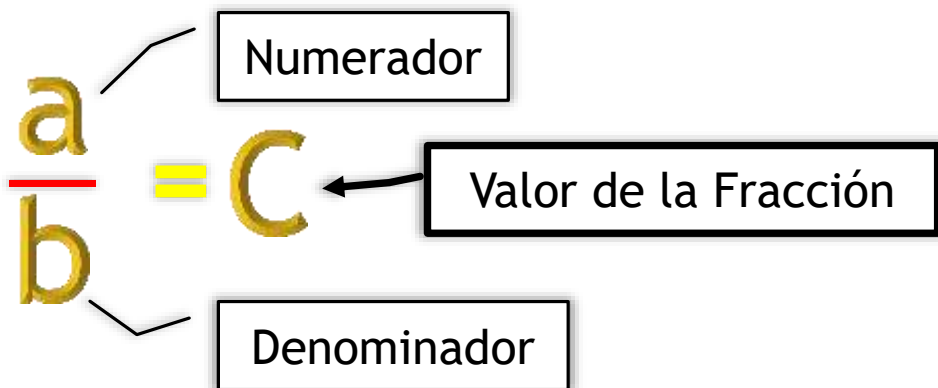
Habilidades: Aplicar, resolver.



Valor a trabajar: Voluntad y compromiso

CONOCIMIENTOS PREVIOS

Componentes de una fracción



$$\frac{0}{3} = 0$$

$$\frac{3}{0} = \cancel{\exists}$$

$$\forall b \neq 0$$

Se lee: Para todo, b es distinto de cero



Tipos de fracciones

1.- Fracción propia

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

2.- Fracción Impropia 3.- Fracción mixta

$$\frac{12}{8} =$$

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

4.- Fracción entera

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

5.- Fracción decimal

$$\frac{2}{10} =$$



Transformar de fracción impropia a número mixto o fracción mixta.

$$\frac{6}{5} = 1 \frac{1}{5}$$

$$\frac{16}{7} = 2 \frac{2}{7}$$

Transformar de número mixto a fracción impropia.

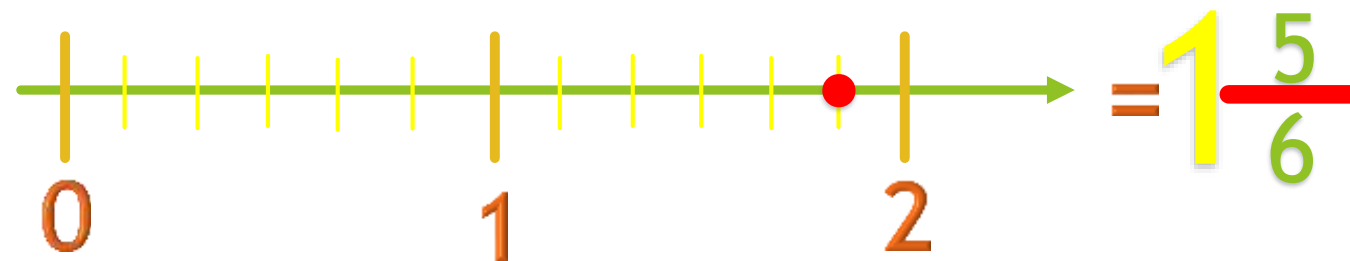
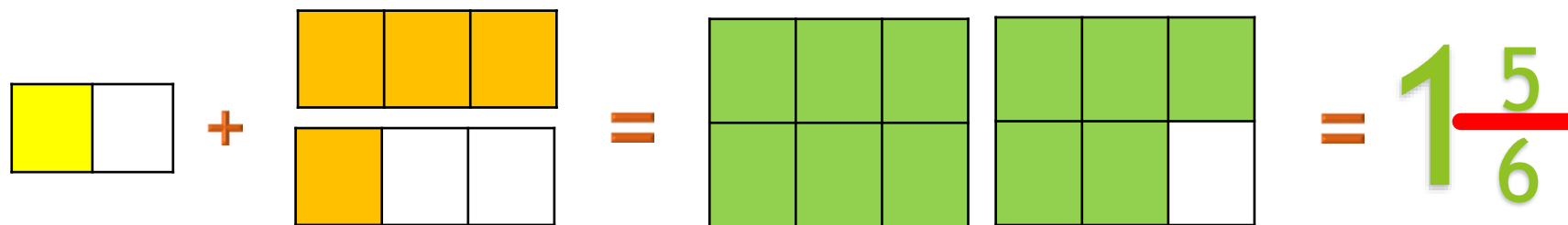
$$3 \frac{2}{5} = \frac{17}{5} = \begin{array}{|c|c|c|c|c|} \hline \text{orange} & \text{orange} & \text{orange} & \text{orange} & \text{orange} \\ \hline \end{array} \begin{array}{|c|c|c|c|c|} \hline \text{orange} & \text{orange} & \text{orange} & \text{orange} & \text{orange} \\ \hline \end{array} \begin{array}{|c|c|c|c|c|} \hline \text{orange} & \text{orange} & \text{orange} & \text{orange} & \text{orange} \\ \hline \end{array} \begin{array}{|c|c|c|c|c|} \hline \text{orange} & \text{orange} & \text{white} & \text{white} & \text{white} \\ \hline \end{array}$$

The diagram illustrates the conversion of the mixed number 3 2/5 to the improper fraction 17/5. It shows the multiplication of the whole number 3 by the denominator 5 (indicated by a plus sign and an 'x' with arrows) to get 15, which is then added to the numerator 2 to get 17. The final result is shown as a grid of 17 orange blocks arranged in two rows of five and a third row of seven.

Suma de fracciones con distinto denominador.

$$\frac{1}{2} + \frac{4}{3} = \frac{3+8}{6} = \frac{11}{6} = 1\frac{5}{6}$$

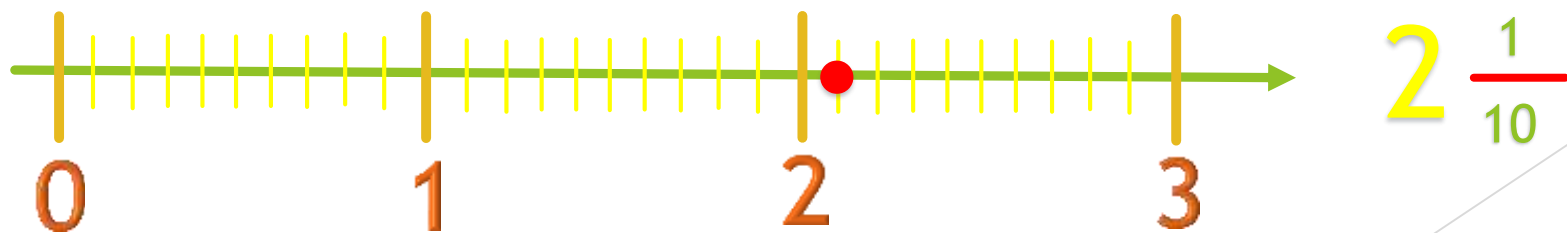
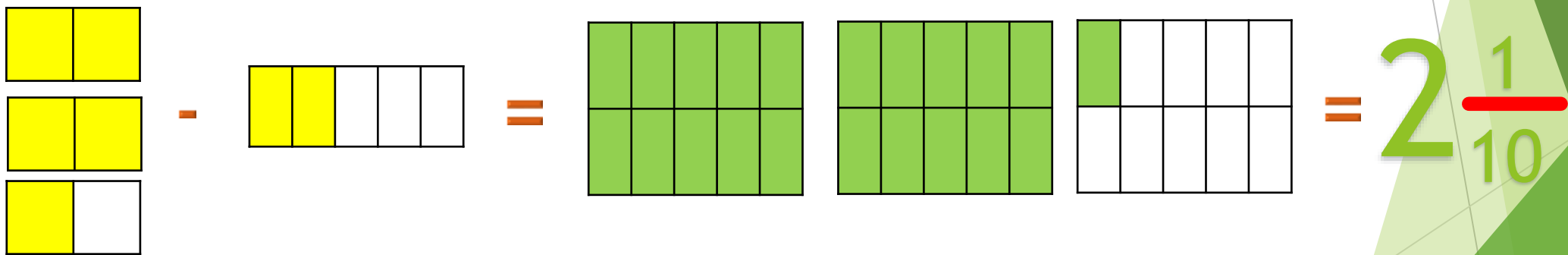
The diagram illustrates the process of adding the fractions $\frac{1}{2}$ and $\frac{4}{3}$. A green 'X' is drawn over the original fractions, and a yellow dot is placed between the denominators 2 and 3. Curved arrows show the conversion of $\frac{1}{2}$ to $\frac{3}{6}$ and $\frac{4}{3}$ to $\frac{8}{6}$. The numerators 3 and 8 are added to get 11, resulting in the fraction $\frac{11}{6}$. This is then converted to the mixed number $1\frac{5}{6}$.





Resta de fracciones con distinto denominador.

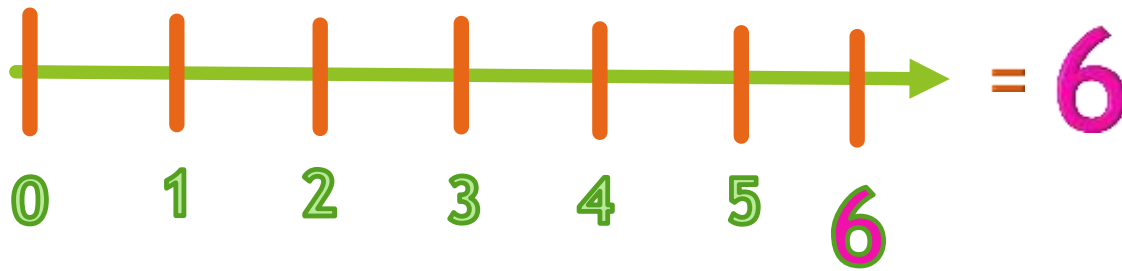
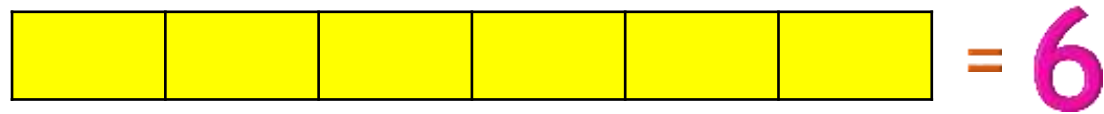
$$\frac{5}{2} - \frac{2}{5} = \frac{25 - 4}{10} = \frac{21}{10} = 2 \frac{1}{10}$$



Sumar fracciones mixtas

Método 1 simple: Sumar o restar números mixtos con fracción de igual denominador.

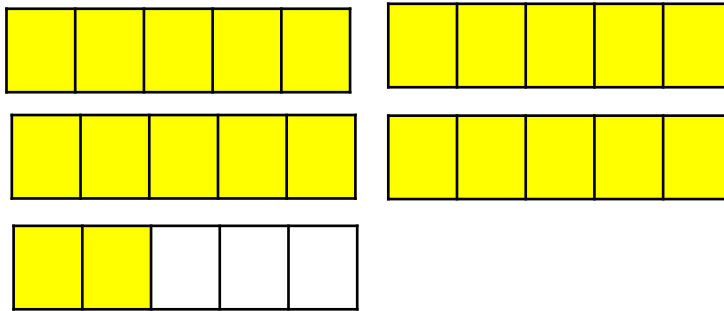
$$2\frac{1}{3} + 3\frac{2}{3} = 5\frac{3}{3} = 5 + 1 = 6$$

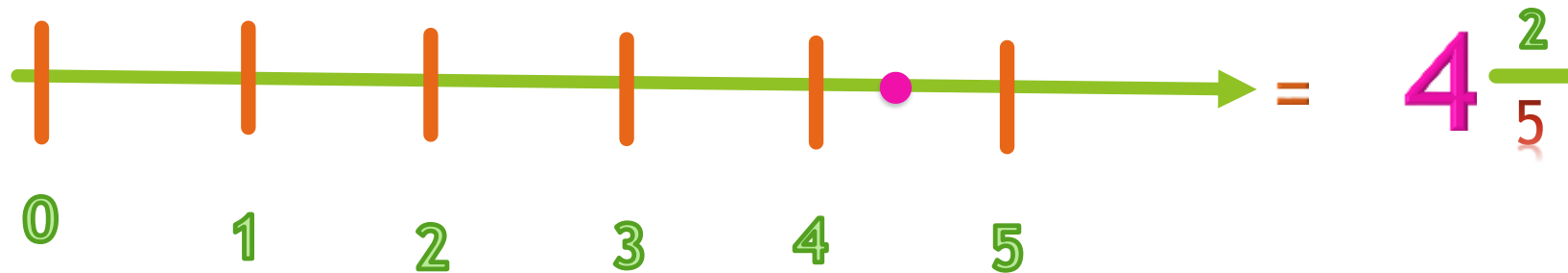


Restar fracciones mixtas



Método 1 simple: Sumar o restar números mixtos con fracción de igual denominador.

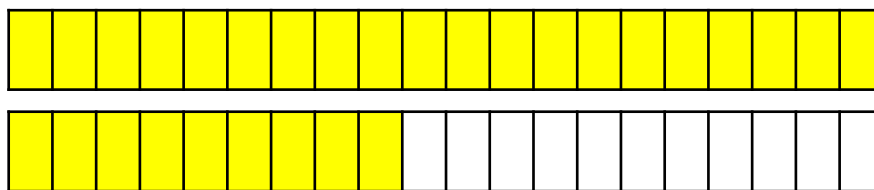
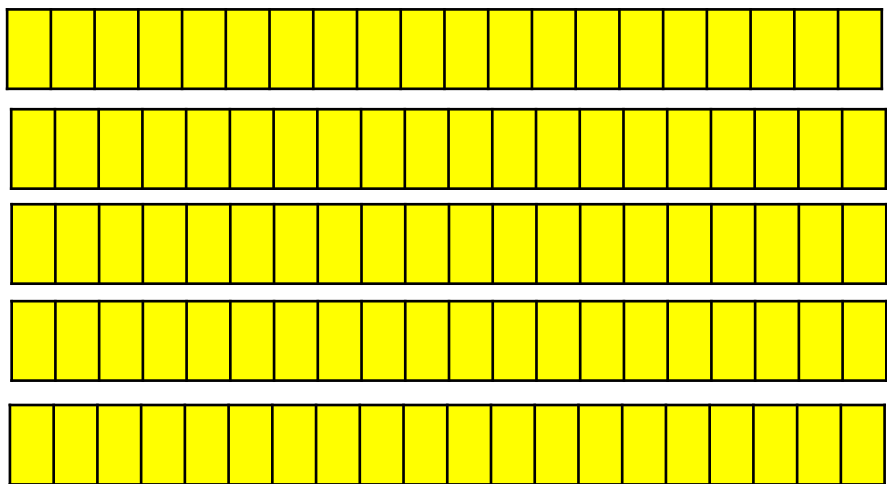
$$12\frac{4}{5} - 8\frac{2}{5} = 4\frac{2}{5} =$$




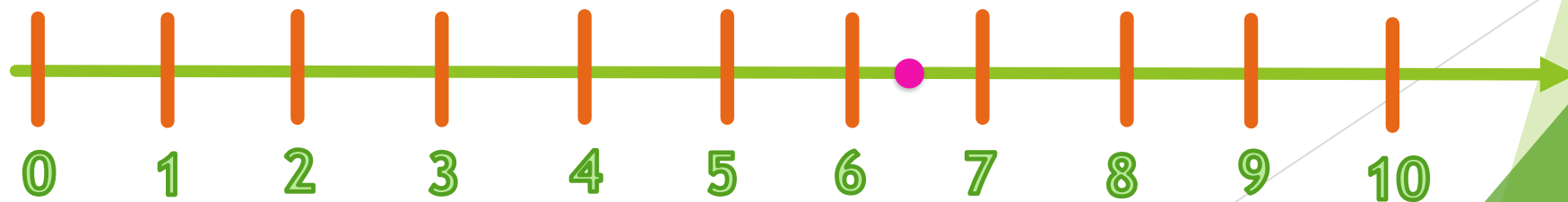
Sumar fracciones mixtas

Método 2: Transformar de número mixto a fracción impropia luego sumar o restar.

$$4\frac{1}{5} + 2\frac{2}{8} = \frac{21}{5} + \frac{18}{8} = \frac{168 + 90}{40} = \frac{258}{40} = 6\frac{18}{40} = 6\frac{9}{20}$$



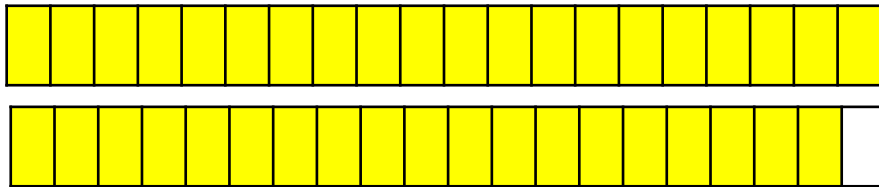
$$= 6\frac{9}{20}$$



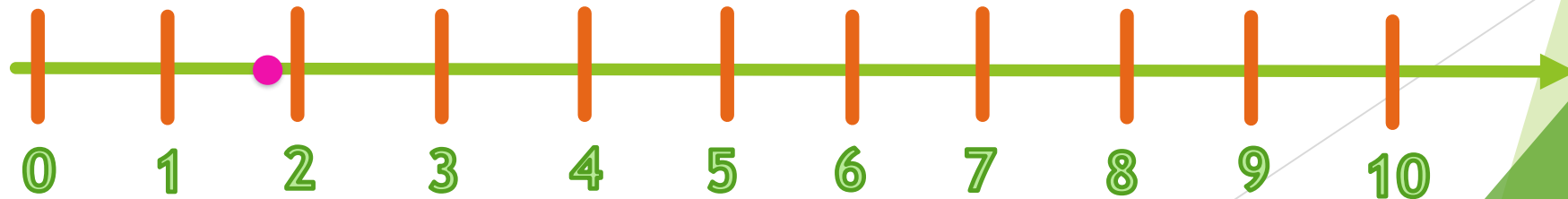
Restar fracciones mixtas

Método 2: Transformar de número mixto a fracción impropia luego sumar o restar.

$$4\frac{1}{5} - 2\frac{2}{8} = \frac{21}{5} - \frac{18}{8} = \frac{168 - 90}{40} = \frac{78}{40} = \frac{39}{20} = 1\frac{19}{20}$$



$$= 1\frac{19}{20}$$



Ticket de salida



ANTES DE SALIR HAZ CLIC EN EL ENLACE PARA RESPONDER TU TICKET DE SALIDA. UTILIZA TU CUENTA DE CORREO INSTITUCIONAL.

