**PROPÓSITO:**

El principal propósito de este tema, lograr que los estudiantes apliquen los temas vistos en matemáticas de forma ludica.

**MOTIVACIÓN:**

La principal motivación de la temática es mostrar que hay otras formas más agradables para aprender matematica.

**EXPLICACIÓN:**

# Cuadrados Mágicos con Fracciones

**¡LLENEMOS EL CUADRADO!**

En el cuadrado observamos sumas y restas que se resuelven en forma horizontal y vertical, así se tiene que:

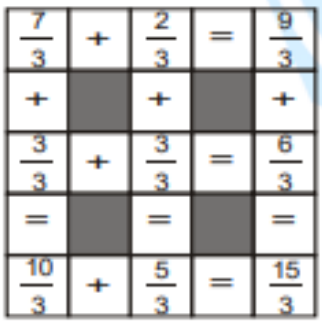


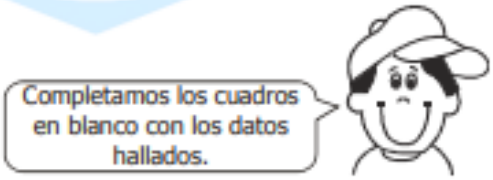
1ra. fila (horizontal) $= \frac{7}{3} + \frac{2}{3} = \frac{9}{3}$

2da. fila (horizontal) $= \frac{3}{3} + \frac{3}{3} = \frac{6}{3}$

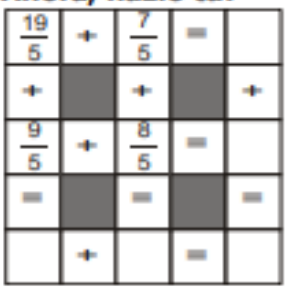
1ra. columna (vertical) $= \frac{7}{3} + \frac{3}{3} = \frac{10}{3}$

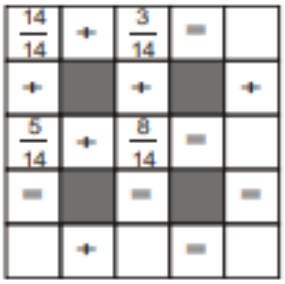
2da. columna (vertical) $= \frac{2}{3} + \frac{3}{3} = \frac{5}{3}$

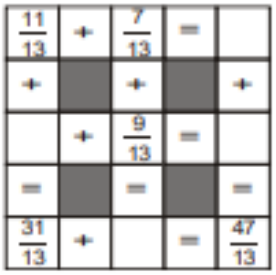





**Ahora, hazlo tú:**







| | | | | |
|---|---|---|---|---|
| $\frac{23}{15}$ | + | | = | $\frac{30}{15}$ |
| + | | + | | + |
| $\frac{38}{15}$ | + | $\frac{15}{15}$ | = | |
| = | | = | | = |
| | + | | = | $\frac{83}{15}$ |

| | | | | |
|---|---|---|---|---|
| $\frac{8}{11}$ | + | $\frac{13}{11}$ | = | |
| + | | + | | + |
| | + | | = | |
| = | | = | | = |
| $\frac{19}{11}$ | + | | = | $\frac{39}{11}$ |

| | | | | |
|---|---|---|---|---|
| $\frac{17}{20}$ | + | | = | $\frac{42}{20}$ |
| + | | + | | + |
| $\frac{11}{20}$ | + | $\frac{13}{20}$ | = | |
| = | | = | | = |
| | + | $\frac{38}{20}$ | = | $\frac{68}{20}$ |



| | | | | |
|---|---|---|---|---|
| $\frac{14}{7}$ | + | $\frac{35}{7}$ | = | |
| + | | + | | + |
| | + | | = | $\frac{21}{7}$ |
| = | | = | | = |
| $\frac{25}{7}$ | + | | = | $\frac{70}{7}$ |

| | | | | |
|---|---|---|---|---|
| $\frac{51}{31}$ | + | | = | $\frac{70}{31}$ |
| + | | + | | + |
| | + | | = | |
| = | | = | | = |
| $\frac{71}{31}$ | + | $\frac{28}{31}$ | = | |

| | | | | |
|---|---|---|---|---|
| $\frac{15}{11}$ | − | $\frac{11}{11}$ | = | |
| − | | − | | − |
| $\frac{5}{11}$ | − | | = | |
| = | | = | | = |
| | − | | = | $\frac{1}{11}$ |

| | | | | |
|---|---|---|---|---|
| $\frac{40}{10}$ | − | | = | $\frac{21}{10}$ |
| − | | − | | − |
| | − | $\frac{8}{10}$ | = | |
| = | | = | | = |
| | − | | = | $\frac{10}{10}$ |

| | | | | |
|---|---|---|---|---|
| $\frac{53}{8}$ | − | $\frac{23}{8}$ | = | |
| − | | − | | − |
| | − | $\frac{3}{8}$ | = | |
| = | | = | | = |
| | − | | = | $\frac{20}{8}$ |

| | | | | |
|---|---|---|---|---|
| $\frac{59}{14}$ | − | $\frac{32}{14}$ | = | |
| − | | − | | − |
| | − | | = | $\frac{13}{14}$ |
| = | | = | | = |
| $\frac{30}{14}$ | − | | = | |

| | | | | |
|---|---|---|---|---|
| | − | $\frac{55}{17}$ | = | $\frac{18}{17}$ |
| − | | − | | − |
| $\frac{44}{17}$ | − | | = | $\frac{16}{17}$ |
| = | | = | | = |
| | − | $\frac{27}{17}$ | = | |

| | | | | |
|---|---|---|---|---|
| $\frac{88}{15}$ | − | | = | $\frac{80}{15}$ |
| − | | − | | − |
| $\frac{18}{15}$ | − | $\frac{4}{15}$ | = | |
| = | | = | | = |
| | − | $\frac{4}{15}$ | = | $\frac{68}{15}$ |

**EJERCICIOS:**

**EVALUACIÓN:**

**BIBLIOGRAFÍA:**