

The background features a dark purple grid pattern. Overlaid on this are several thick, diagonal lines in various colors: yellow, orange, red, purple, green, and dark blue. The word 'MATEMÁTICA' is written in white, bold, uppercase letters, slanted to follow the path of one of the yellow lines.

MATEMÁTICA

AGORA É COM VOCÊ...

$$\begin{array}{l} 5^3 + (-7)^2 = \\ 125 + 49 = \\ 174 \end{array} \quad \left| \quad \begin{array}{l} (-1)^3 + (-1)^2 = \\ -1 + (+1) = \\ 0 \end{array} \right.$$

POTÊNCIA DE BASE RACIONAL

NUMERADORES

$$\left(\frac{1}{2} \right) \times \left(\frac{1}{2} \right) \times \left(\frac{1}{2} \right) = \left(\frac{1}{2} \right)^3 = \frac{1^3}{2^3} = \frac{1}{8}$$

DENOMINADORES

EXPOENTE ÍMPAR

$$\left(-\frac{2}{3}\right) \times \left(-\frac{2}{3}\right) \times \left(-\frac{2}{3}\right) = \left(-\frac{2}{3}\right)^3$$

**3 FATORES
NEGATIVOS**

$$-\frac{2^3}{3^3} = -\frac{2 \times 2 \times 2}{3 \times 3 \times 3} = -\frac{8}{27} \rightarrow \text{POTÊNCIA NEGATIVA}$$

$$\left(-\frac{2}{3}\right) \times \left(-\frac{2}{3}\right) \times \left(-\frac{2}{3}\right) \times \left(-\frac{2}{3}\right) =$$

4 FATORES NEGATIVOS

EXPOENTE PAR

**POTÊNCIA
POSITIVA**

$$\left(-\frac{2}{3}\right)^4 = \frac{2^4}{3^4} = \frac{2 \times 2 \times 2 \times 2}{3 \times 3 \times 3 \times 3} = \frac{16}{81}$$

EXPOENTE PAR

$$\underbrace{(-0,2) \times (-0,2)}_{\text{2 FATORES NEGATIVOS}} = (-0,2)^2 = 0,04$$

The diagram shows the multiplication of two negative numbers, -0,2 and -0,2. A bracket under both numbers is labeled "2 FATORES NEGATIVOS". This is followed by an equals sign and the expression (-0,2) with a superscript 2, which is labeled "EXPOENTE PAR". A final equals sign leads to the result 0,04, with an upward-pointing arrow under the zero before the 4, labeled "POTÊNCIA POSITIVA".

**2 FATORES
NEGATIVOS**

**POTÊNCIA
POSITIVA**

EXPOENTE ÍMPAR

$$\underbrace{(-0,1) \times (-0,1) \times (-0,1)} = (-0,1)^3$$

**3 FATORES
NEGATIVOS**

$$= -0,001$$

↑
**POTÊNCIA
NEGATIVA**

VAMOS EXERCITAR?

Preste muita atenção...

$$(-1,5)^2 = (-1,5) \times (-1,5) = 2,25$$

$$\left(-\frac{5}{7}\right)^2 = \left(-\frac{5}{7}\right) \times \left(-\frac{5}{7}\right) = \frac{25}{49}$$