Testar – págs. 14 e 15

Ex. 1

–3 e 2 são números inteiros, $-3 \times 2 = -6$ e –6 é um número inteiro negativo.

Ex. 2

Potência	$(-9)^2$	$\left(+\frac{27}{9}\right)^{27}$	$(-35)^{457}$	$(+2{,}4)^{223}$
Sinal	+	+	–	+

Ex. 3

3.1. $\left[(-3)^2 \times \left(-\frac{7}{2}\right)\right] \times \left(-\frac{5}{3} + \frac{6}{5}\right) =$

$\underset{(\times 5)}{} \quad \underset{(\times 3)}{}$

$= \left(9 \times \left(-\frac{7}{2}\right)\right) \times \left(-\frac{25}{15} + \frac{18}{15}\right) =$

$= -\frac{63}{2} \times \left(-\frac{7}{15}\right) =$

$= \frac{441}{30} =$

$= \frac{147}{10}$

3.2. $\left[-5 \times \left(-\frac{2}{1} + \frac{1}{2}\right)\right]^3 : \left(-\frac{5}{2}\right) =$

$\underset{(\times 2)}{}$

$= \left[-5 \times \left(-\frac{4}{2} + \frac{1}{2}\right)\right]^3 \times \left(-\frac{2}{5}\right) =$

$= \left[-5 \times \left(-\frac{3}{2}\right)\right]^3 \times \left(-\frac{2}{5}\right) =$

$= \left(\frac{15}{2}\right)^3 \times \left(-\frac{2}{5}\right) =$

$= \frac{3375}{8} \times \left(-\frac{2}{5}\right) =$

$= -\frac{6750}{40}$

$= -\frac{675}{4}$

3.3. $0^{456} + (-1)^{789} \times \left(-\sqrt[3]{\frac{125}{27}}\right) + (+1)^{178} \times \left(-\frac{3^2}{4} + \sqrt{36}\right) =$

$= 0 + (-1) \times \left(-\frac{5}{3}\right) + 1 \times \left(-\frac{9}{4} + \frac{6}{1}\right) =$

$\underset{(\times 4)}{}$

$= \frac{5}{3} + \left(-\frac{9}{4} + \frac{24}{4}\right) =$

$= \frac{5}{3} + \frac{15}{4} =$

$\underset{(\times 4)}{} \quad \underset{(\times 3)}{}$

$= \frac{20}{12} + \frac{45}{12} =$

$= \frac{65}{12}$

3.4. $\sqrt{\left(-\frac{3}{2}\right) \times \left(-\frac{2}{3}\right) + \sqrt[3]{\frac{27}{64}} - \left(\sqrt[3]{\frac{3}{2}}\right)^3} =$

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

$\underset{(\times 4)}{} \quad \underset{(\times 2)}{}$

$= \sqrt{\frac{4}{4} + \frac{3}{4} - \frac{6}{4}} =$

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

$= \frac{1}{2}$

Ex. 4

Como a área de cada quadrado é 36 mm², então cada quadrado tem 6 mm de lado ($\sqrt{36} = 6$).
Logo, $P = 6 \times 14 = 84$ mm.

Ex. 5

$2 \times (-p) = -p + (-p) = -(p + p) = -(2p)$

Ex. 6

$\sqrt{\frac{4}{25}} = \frac{\sqrt{4}}{\sqrt{25}} = \frac{2}{5} = \frac{4}{10} = 0{,}4$

Ex. 7

$\frac{4}{3} \times \left(-\frac{5}{7}\right) =$

$= \left[4 \times \left(-\frac{5}{7}\right)\right] : 3 =$

$= \left[-\left(4 \times \frac{5}{7}\right)\right] : 3 =$

$= \left[-\left(\frac{4 \times 5}{7}\right)\right] : 3 =$

$= \left(-\frac{4 \times 5}{7}\right) : 3 =$

$= -\left(\frac{4 \times 5}{7} : 3\right) =$

$= -\frac{4 \times 5}{3 \times 7} =$

$= -\left(\frac{4}{3} \times \frac{5}{7}\right)$

Ex. 8

Como $A_{\square} = 16$ cm², $\overline{R'S'} = \sqrt{16} = 4$ cm.
Como $\overline{UR'} = 4$ cm e $\overline{S'T'} = \overline{UR'} = 4$ cm (porque os triângulos são geometricamente iguais), então:
$\overline{UT} = \overline{UR'} + \overline{R'S'} + \overline{S'T}$
Logo, $\overline{UT} = 4 + 4 + 4 = 12$ cm.