

## Lista de Exercícios 01

### Operações Básicas

1. Calcule:

- |                 |                 |
|-----------------|-----------------|
| a) $8 - 5$      | k) $6 - (+13)$  |
| b) $-5 + 8$     | l) $91 - 78$    |
| c) $13 - 19$    | m) $-45 + 58$   |
| d) $14 + (-18)$ | n) $(-21) + 15$ |
| e) $-9 + 17$    | o) $-7 + 18$    |
| f) $20 - 31$    | p) $-21 + 9$    |
| g) $-17 + 33$   | q) $31 - 12$    |
| h) $23 + (-18)$ | r) $59 - 87$    |
| i) $56 - 32$    | s) $23 + (-51)$ |
| j) $-41 - 67$   | u) $92 + (-25)$ |

2. Efetue as operações:

- |                     |                     |
|---------------------|---------------------|
| a) $8(-5)$          | k) $6 - (+13)$      |
| b) $-5 * 8$         | l) $-81 \div 9$     |
| c) $13(-19)$        | m) $-45(-58)$       |
| d) $-14(-18)$       | n) $(-21)15$        |
| e) $-9 * 17$        | o) $-18 \div 3$     |
| f) $20 \div (-5)$   | p) $-135 \div 9$    |
| g) $-17 * 33$       | q) $31(-12)$        |
| h) $90 \div (-18)$  | r) $-87 \div (-3)$  |
| i) $-56 \div (-28)$ | s) $23(-51)$        |
| j) $-41(-67)$       | u) $325 \div (-25)$ |

3. Simplifique as expressões numéricas:

- a)  $3 + 5 * 2 - 4 \div 2$
- b)  $9 + (21 - 15) * 2$
- c)  $((5 + 3) * 12) \div ((5 - 3) * 4)$
- d)  $50 - (20 \div 2)$
- e)  $12 * 6 - 14 + 18 \div 4$
- f)  $[(18 + 3 * 2) \div 8 + 5 * 3] \div 6$
- g)  $[(8 * 4 + 3) \div 7 + (3 + 15 \div 5) * 3]$
- h)  $[(+2)(-12 \div 4) * (-42 \div 6)]$
- i)  $(+2 - 3 + 1) * (-2 + 2)$
- j)  $(+4 - 9) \div (-5 + 3)$
- k)  $[2 - (19 - 7) \div 6] * 2 + 12$

4. Calcule:

- |                                                |                                                 |
|------------------------------------------------|-------------------------------------------------|
| a) $\frac{5}{10} + \frac{2}{8}$                | k) $\frac{4}{4} + \frac{1}{4}$                  |
| b) $\frac{3}{7} + \frac{3}{14}$                | l) $\frac{5}{9} - \frac{1}{3}$                  |
| c) $\frac{2}{3} + \frac{2}{6} - \frac{4}{8}$   | m) $\frac{8}{10} + \frac{2}{10} - \frac{4}{10}$ |
| d) $\frac{1}{7} - \frac{6}{7}$                 | n) $\frac{9}{13} - \frac{5}{7} + \frac{1}{5}$   |
| e) $\frac{4}{5} - \frac{3}{8} + \frac{6}{9}$   | o) $\frac{3}{6} + \frac{6}{6}$                  |
| f) $\frac{9}{12} + \frac{3}{12}$               | p) $\frac{18}{20} - \frac{2}{10}$               |
| g) $\frac{5}{8} - \frac{7}{13}$                | q) $\frac{1}{8} + \frac{3}{15} - \frac{2}{5}$   |
| h) $\frac{9}{22} + \frac{12}{22}$              | r) $\frac{12}{13} + \frac{3}{13}$               |
| i) $\frac{2}{9} - \frac{14}{15} + \frac{1}{5}$ | s) $\frac{2}{6} - \frac{1}{4} + \frac{3}{8}$    |
| j) $\frac{7}{10} - \frac{1}{3} - \frac{2}{4}$  | u) $\frac{6}{8} - \frac{2}{4}$                  |

5. Calcule:

- |                                                     |                                                     |
|-----------------------------------------------------|-----------------------------------------------------|
| a) $\frac{5}{10} * \frac{2}{8}$                     | k) $\frac{4}{4} \div \frac{1}{4}$                   |
| b) $\frac{3}{7} * \frac{3}{14}$                     | l) $\frac{5}{9} * \frac{1}{3}$                      |
| c) $\frac{2}{3} * \frac{2}{6} \div \frac{4}{8}$     | m) $\frac{8}{10} * \frac{2}{10} \div \frac{4}{10}$  |
| d) $\frac{1}{7} \div \frac{6}{7}$                   | n) $\frac{9}{13} * \frac{5}{7} \div \frac{1}{5}$    |
| e) $\frac{4}{5} * \frac{3}{8} \div \frac{6}{9}$     | o) $\frac{3}{6} \div \frac{6}{6}$                   |
| f) $\frac{9}{12} \div \frac{3}{12}$                 | p) $\frac{18}{20} \div \frac{2}{10}$                |
| g) $\frac{5}{8} \div \frac{7}{13}$                  | q) $\frac{1}{8} \div \frac{3}{15} \div \frac{2}{5}$ |
| h) $\frac{9}{22} * \frac{12}{22}$                   | r) $\frac{12}{13} * \frac{3}{13}$                   |
| i) $\frac{2}{9} * \frac{14}{15} \div \frac{1}{5}$   | s) $\frac{2}{6} * \frac{1}{4} \div \frac{3}{8}$     |
| j) $\frac{7}{10} \div \frac{1}{3} \div \frac{2}{4}$ | u) $\frac{6}{8} \div \frac{2}{4}$                   |

6. Simplifique as expressões numéricas abaixo:

- a)  $\left\{ \frac{1}{2} + \left[ \left( \frac{2}{3} - \frac{1}{5} \right) * \frac{7}{8} \right] \right\}$
- b)  $-\frac{4}{5} + \left[ -\frac{6}{5} + \left( \frac{2}{3} + \frac{11}{4} \right) \right]$
- c)  $\left\{ \frac{1}{4} - \frac{5}{4} + \left[ \frac{4}{7} - \left( \frac{5}{6} + \frac{2}{7} \right) \right] \right\}$
- d)  $\left\{ 3 - \frac{7}{9} + \frac{1}{2} * \left[ -\frac{1}{10} - \left( \frac{12}{5} + \left( -\frac{11}{3} \right) \right) \right] \right\} + \frac{2}{5}$

$$e) 2 - \frac{3}{4} - \left\{ \frac{5}{9} - \left[ -2 + \left( \frac{7}{8} + \frac{1}{8} \right) \right] \right\}$$

$$f) -\frac{5}{2} * \left[ \frac{9}{2} - \left( \frac{3}{4} - \frac{2}{5} \right) \div \frac{1}{3} \right]$$

$$g) -5 + \left\{ \frac{3}{2} \div 4 + \left[ -\frac{4}{5} - \left( \frac{1}{2} + \frac{11}{10} \right) \right] \right\}$$

$$h) -\frac{6}{11} \div \left( \frac{4}{9} - \frac{3}{2} \right) * \frac{4}{3}$$

$$i) 1 - \left\{ \frac{5}{3} + \left[ -\frac{1}{5} + \frac{7}{3} * \left( 8 - \frac{5}{12} \right) \right] \right\}$$

$$j) \left\{ -\frac{3}{2} - \left[ -\frac{13}{3} - \left( -\frac{2}{9} - \frac{7}{8} \right) \right] \right\}$$

$$k) -2 + \left\{ \frac{4}{5} - \left[ \frac{15}{22} + \left( \frac{1}{10} - \frac{3}{4} \right) \div \frac{4}{3} \right] \right\}$$

7. Calcule:

- |                    |                     |
|--------------------|---------------------|
| a) $3,01 + 2,834$  | k) $0,801 - 2,789$  |
| b) $56,98 - 4,78$  | l) $4,59 + 1,23$    |
| c) $-3,8 - 2,56$   | m) $8,012 - 3,055$  |
| d) $67,4 + 2,6$    | n) $8,939 + 0,109$  |
| e) $2,678 - 1,9$   | o) $-0,283 + 0,755$ |
| f) $23,57 + 5,889$ | p) $9,785 - 10,870$ |
| g) $5,01 - 3,90$   | q) $3,985 - 6,012$  |
| h) $-7,09 + 2,83$  | r) $2,03 + 0,001$   |
| i) $8,001 - 1,45$  | s) $3,097 - 8,01$   |
| j) $0,91 + 0,002$  | u) $4,501 + 9,001$  |

8. Simplifique as expressões numéricas abaixo:

- a)  $\{0,91 + [(7,827 - 0,001) + 2,993]\}$
- b)  $8,937 + [-0,1 + (4,97 + 0,002)]$
- c)  $\{3,084 - 0,834 + [0,003 - (23,87 + 0,02)]\}$
- d)  $2,974 + \{3,56 - 2,467 + [-0,1 - (9,05 + 0,23)]\}$
- e)  $8,746 - \{0,973 - [3,56 + (2,13 + 6,98)]\}$
- f)  $5,05 - [2,08 + (4,98 - 0,986)]$
- g)  $1,02 + \{2,94 + [22,098 - (13,091 + 0,003)]\}$
- h)  $3,49 - (1,229 + 0,023)$
- i)  $6,928 - \{2,54 + [0,012 + (2,33 - 1,02)]\}$
- j)  $\{3,23 + [3,19 - (5,78 + 0,012)]\}$
- k)  $-0,008 + \{5,87 - [2,864 + (1,02 - 0,002)]\}$
- l)  $23,98 + [0,23 - (7,03 + 0,002)]\}$

9. Calcule:

- |                      |                         |
|----------------------|-------------------------|
| a) $3,01 * 2,834$    | k) $7,392 \div 2,1$     |
| b) $56,98 * 4,78$    | l) $0,354 \div (-0,06)$ |
| c) $-3,8 * (-2,56)$  | m) $-3,36 : (-8)$       |
| d) $67,4 * 2,6$      | n) $6 \div 3,2$         |
| e) $2,678 * (-1,9)$  | o) $11 \div 5,5$        |
| f) $23,57 * 5,889$   | p) $0,0081 \div (-0,9)$ |
| g) $5,01 * (-3,90)$  | q) $19,88 \div 7,1$     |
| h) $-7,09 * 2,83$    | r) $2,25 \div 0,15$     |
| i) $8,001 * (-1,45)$ | s) $0,006 \div 8$       |
| j) $0,91 * 0,002$    | u) $-12 : 6,4$          |

10. Calcule as potências:

- |                                  |                                  |
|----------------------------------|----------------------------------|
| a) $(2,1)^2$                     | k) $\left(\frac{1}{10}\right)^7$ |
| b) $(0,003)^4$                   | l) $(1,1)^2$                     |
| c) $\left(\frac{2}{3}\right)^5$  | m) $(0,00003)^2$                 |
| d) $(-1,5)^2$                    | n) $\left(\frac{4}{-3}\right)^2$ |
| e) $(-0,002)^3$                  | o) $(0,9)^2$                     |
| f) $(-0,03)^4$                   | p) $(-1,2)^2$                    |
| g) $\left(-\frac{6}{7}\right)^3$ | q) $(0,2)^8$                     |
| h) $(-0,5)^3$                    | r) $(0,001)^3$                   |
| i) $(0,3)^4$                     | s) $(-1,3)^2$                    |
| j) $\left(-\frac{2}{5}\right)^4$ | u) $\left(\frac{-1}{2}\right)^9$ |

11. Calcule as raízes quadradas:

- |                               |                             |
|-------------------------------|-----------------------------|
| a) $\sqrt{0,0004}$            | k) $\sqrt{0,01}$            |
| b) $\sqrt{1,21}$              | l) $\sqrt{\frac{64}{121}}$  |
| c) $\sqrt{1,96}$              | m) $\sqrt{\frac{10000}{9}}$ |
| d) $\sqrt{0,000036}$          | n) $\sqrt{6,25}$            |
| e) $\sqrt{0,1225}$            | o) $\sqrt{0,000001}$        |
| f) $\sqrt{\frac{49}{81}}$     | p) $\sqrt{0,16}$            |
| g) $\sqrt{0,00000196}$        | q) $\sqrt{0,64}$            |
| h) $\sqrt{\frac{1}{100}}$     | r) $\sqrt{0,0144}$          |
| i) $\sqrt{2,25}$              | s) $\sqrt{1,44}$            |
| j) $\sqrt{\frac{169}{10000}}$ | u) $\sqrt{\frac{81}{4}}$    |