

## Règles de calculs à connaître

| Puissances  | Racines carrées                                  | Factoriser / Développer                | Fractions  |
|---|--|--|--|
| $\underbrace{100.....0}_{n \text{ zéros}} = 10^n$     | $\sqrt{\frac{a}{b}} = \frac{\sqrt{a}}{\sqrt{b}}$ | $a(b + c) = ab + ac$                   | $\frac{a}{b} + \frac{c}{b} = \frac{a+c}{b}$                      |
| $\underbrace{0,0.....01}_{n \text{ zéros}} = 10^{-n}$ | $(\sqrt{a})^2 = a$                               | $a(b - c) = ab - ac$                   | $\frac{a}{b} - \frac{c}{b} = \frac{a-c}{b}$                      |
| $10^n \times 10^p = 10^{n+p}$                         | $\sqrt{a} \times \sqrt{b} = \sqrt{a \times b}$   |  |  |
| $\frac{10^n}{10^p} = 10^{n-p}$                        | $\sqrt{1} = 1 \quad \sqrt{4} = 2$                | $(a+b)(c+d) \\ = \\ ac + ad + bc + bd$ | $\frac{a}{b} \times \frac{c}{d} = \frac{a \times c}{b \times d}$ |
| $(10^n)^p = 10^{n \times p}$                          | $\sqrt{9} = 3 \quad \sqrt{16} = 4$               |  |  |
|   | $\sqrt{25} = 5 \quad \sqrt{36} = 6$              |  |  |
| $\frac{1}{10^n} = 10^{-n}$                            | $\sqrt{49} = 7 \quad \sqrt{64} = 8$              | $(a+b)^2 = a^2 + 2ab + b^2$            | $\frac{a}{b} \div \frac{c}{d} = \frac{a}{b} \times \frac{d}{c}$  |
| $(a \times b)^m = a^m \times b^m$                     | $\sqrt{81} = 9 \quad \sqrt{100} = 10$            | $(a-b)^2 = a^2 - 2ab + b^2$            |  |
| $(\frac{a}{b})^m = \frac{a^m}{b^m}$                   | $\sqrt{121} = 11 \quad \sqrt{144} = 12$          | $(a+b)(a-b) = a^2 - b^2$               |  |