

Estimat/da alumne/a:

Tens a les mans un quadern de càlcul que et permetrà potenciar i millorar les teues habilitats matemàtiques.

Hauràs de buscar les teues pròpies estratègies que t'ajudaran a millorar els resultats.

Cada sèrie està relacionada amb un contingut del currículum, així que et servirà per a entendre millor allò que vas a treballar a classe.

Al final del quadern podràs anotar els resultats obtinguts cada dia i construir així el teu propi polígon de freqüències que et mostrarà la teua evolució.

Ànim!

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# 1 FRACCIONS I DECIMALS

## FRACCIONS EQUIVALENTS

| DATA: |                               |  |
|-------|-------------------------------|--|
| 1     | $\frac{12}{3} = \frac{x}{2}$  |  |
| 2     | $\frac{5}{10} = \frac{3}{x}$  |  |
| 3     | $\frac{4}{x} = \frac{2}{9}$   |  |
| 4     | $\frac{x}{6} = \frac{7}{14}$  |  |
| 5     | $\frac{5}{3} = \frac{x}{9}$   |  |
| 6     | $\frac{8}{16} = \frac{-2}{x}$ |  |
| 7     | $\frac{-6}{x} = \frac{2}{3}$  |  |
| 8     | $\frac{x}{30} = \frac{4}{12}$ |  |
| 9     | $\frac{28}{x} = \frac{8}{2}$  |  |
| 10    | $\frac{8}{4} = \frac{x}{8}$   |  |
| 11    | $\frac{-3}{15} = \frac{7}{x}$ |  |
| 12    | $\frac{x}{4} = \frac{4}{8}$   |  |
| 13    | $\frac{45}{27} = \frac{x}{3}$ |  |
| 14    | $\frac{20}{x} = \frac{x}{5}$  |  |
| 15    | $\frac{x}{4} = \frac{9}{x}$   |  |

TOTAL ENCERTS

2 FRACCIONS I DECIMALS  
SIMPLIFIQUEM

| DATA: |                   |  |
|-------|-------------------|--|
| 1     | $\frac{7}{28}$    |  |
| 2     | $\frac{33}{22}$   |  |
| 3     | $\frac{5}{15}$    |  |
| 4     | $\frac{9}{12}$    |  |
| 5     | $\frac{-70}{60}$  |  |
| 6     | $\frac{5}{45}$    |  |
| 7     | $\frac{-22}{10}$  |  |
| 8     | $\frac{75}{30}$   |  |
| 9     | $\frac{-100}{80}$ |  |
| 10    | $\frac{18}{42}$   |  |
| 11    | $\frac{-12}{-20}$ |  |
| 12    | $\frac{-60}{36}$  |  |
| 13    | $\frac{26}{39}$   |  |
| 14    | $\frac{70}{49}$   |  |
| 15    | $\frac{-16}{-56}$ |  |

TOTAL ENCERTS

### 3 FRACCIONS I DECIMALS

#### OPEREM I SIMPLIFIQUEM

| DATA: |                             |  |
|-------|-----------------------------|--|
| 1     | $3 + \frac{2}{7}$           |  |
| 2     | $\frac{3}{4} - 1$           |  |
| 3     | $\frac{1}{2} + \frac{1}{5}$ |  |
| 4     | $12 \cdot \frac{5}{4}$      |  |
| 5     | $4 + \frac{3}{2}$           |  |
| 6     | $6 : \frac{1}{3}$           |  |
| 7     | $\frac{1}{3} + \frac{1}{2}$ |  |
| 8     | $18 \cdot \frac{7}{6}$      |  |
| 9     | $2 - \frac{1}{3}$           |  |
| 10    | $15 \cdot \frac{4}{3}$      |  |
| 11    | $\frac{7}{5} : 14$          |  |
| 12    | $32 \cdot \frac{-9}{8}$     |  |
| 13    | $\frac{1}{2} : \frac{3}{4}$ |  |
| 14    | $\frac{1}{5} - \frac{1}{4}$ |  |
| 15    | $\frac{4}{9} - 6$           |  |

TOTAL ENCERTS

# 4 FRACCIONS I DECIMALS

## OPEREM I SIMPLIFIQUEM

| DATA: |                              |  |
|-------|------------------------------|--|
| 1     | $\frac{3}{2} \cdot 8$        |  |
| 2     | $\frac{1}{5} + \frac{1}{10}$ |  |
| 3     | $7 + \frac{2}{3}$            |  |
| 4     | $24 \cdot \frac{5}{6}$       |  |
| 5     | $4 + \frac{1}{7}$            |  |
| 6     | $\frac{2}{9} - 1$            |  |
| 7     | $6 - \frac{2}{5}$            |  |
| 8     | $\frac{4}{3} \cdot 27$       |  |
| 9     | $\frac{1}{2} + \frac{1}{4}$  |  |
| 10    | $15 \cdot \frac{7}{5}$       |  |
| 11    | $5 : \frac{1}{9}$            |  |
| 12    | $\frac{7}{3} : 14$           |  |
| 13    | $\frac{1}{5} - \frac{1}{4}$  |  |
| 14    | $30 \cdot \frac{6}{10}$      |  |
| 15    | $\frac{1}{3} - 2$            |  |

TOTAL ENCERTS

5 FRACCIONS I DECIMALS  
OPEREM I SIMPLIFIQUEM

|       |                             |  |
|-------|-----------------------------|--|
| DATA: |                             |  |
| 1     | $-10 \cdot \frac{7}{5}$     |  |
| 2     | $6 + \frac{1}{3}$           |  |
| 3     | $\frac{1}{4} + \frac{1}{5}$ |  |
| 4     | $\frac{9}{2} - 1$           |  |
| 5     | $8 : \frac{1}{6}$           |  |
| 6     | $\frac{11}{7} \cdot 14$     |  |
| 7     | $2 + \frac{4}{9}$           |  |
| 8     | $24 \cdot \frac{5}{3}$      |  |
| 9     | $-6 + \frac{1}{6}$          |  |
| 10    | $\frac{5}{4} : 15$          |  |
| 11    | $\frac{1}{3} + \frac{1}{7}$ |  |
| 12    | $\frac{5}{3} : \frac{9}{6}$ |  |
| 13    | $\frac{1}{7} - \frac{1}{4}$ |  |
| 14    | $50 \cdot \frac{3}{10}$     |  |
| 15    | $\frac{1}{8} - 1$           |  |

TOTAL ENCERTS

6 FRACCIONS I DECIMALS  
OPEREM I SIMPLIFIQUEM

|       |                               |  |
|-------|-------------------------------|--|
| DATA: |                               |  |
| 1     | $\frac{9}{11} \cdot 22$       |  |
| 2     | $8 : \frac{1}{3}$             |  |
| 3     | $14 \cdot \frac{6}{7}$        |  |
| 4     | $\frac{1}{3} + \frac{1}{6}$   |  |
| 5     | $20 \cdot \frac{7}{5}$        |  |
| 6     | $\frac{3}{2} \cdot 18$        |  |
| 7     | $\frac{5}{4} - 1$             |  |
| 8     | $7 + \frac{9}{5}$             |  |
| 9     | $\frac{10}{7} : 30$           |  |
| 10    | $2 + \frac{4}{17}$            |  |
| 11    | $6 - \frac{3}{4}$             |  |
| 12    | $\frac{-5}{9} : \frac{1}{18}$ |  |
| 13    | $\frac{1}{2} + \frac{1}{15}$  |  |
| 14    | $\frac{1}{8} - \frac{1}{7}$   |  |
| 15    | $\frac{5}{6} - 3$             |  |

TOTAL ENCERTS

## 7 FRACCIONS I DECIMALS

### ESCRIVIM EL DECIMAL

| DATA: |                 |  |
|-------|-----------------|--|
| 1     | $\frac{1}{2}$   |  |
| 2     | $\frac{1}{4}$   |  |
| 3     | $\frac{1}{5}$   |  |
| 4     | $\frac{1}{3}$   |  |
| 5     | $\frac{2}{3}$   |  |
| 6     | $\frac{3}{4}$   |  |
| 7     | $\frac{3}{2}$   |  |
| 8     | $\frac{9}{2}$   |  |
| 9     | $\frac{5}{4}$   |  |
| 10    | $-\frac{2}{5}$  |  |
| 11    | $-\frac{4}{5}$  |  |
| 12    | $\frac{4}{3}$   |  |
| 13    | $\frac{5}{3}$   |  |
| 14    | $-\frac{7}{10}$ |  |
| 15    | $-\frac{3}{10}$ |  |

TOTAL ENCERTS

## 8 FRACCIONS I DECIMALS

### ESCRIVIM LA FRACCIÓ

| DATA: |        |  |
|-------|--------|--|
| 1     | 0,7    |  |
| 2     | 0,03   |  |
| 3     | 1,9    |  |
| 4     | -0,001 |  |
| 5     | -0,9   |  |
| 6     | 0,13   |  |
| 7     | -1,1   |  |
| 8     | 0,029  |  |
| 9     | -0,43  |  |
| 10    | 0,31   |  |
| 11    | -0,017 |  |
| 12    | -0,37  |  |
| 13    | 0,02   |  |
| 14    | 2,5    |  |
| 15    | -0,05  |  |

TOTAL ENCERTS

# 9 FRACCIONS I DECIMALS

## FRACCIÓ DE DENOMINADOR 3

|       |                                  |  |
|-------|----------------------------------|--|
| DATA: |                                  |  |
| 1     | $\frac{25}{15}$                  |  |
| 2     | 2                                |  |
| 3     | -1                               |  |
| 4     | 0                                |  |
| 5     | 0,333...                         |  |
| 6     | 0,666...                         |  |
| 7     | $\frac{1}{6}$ de 14              |  |
| 8     | $1 + \frac{1}{3}$                |  |
| 9     | $6 - \frac{4}{3}$                |  |
| 10    | $\frac{1}{3} - 2$                |  |
| 11    | $\frac{3}{5} \cdot \frac{5}{9}$  |  |
| 12    | $\frac{1}{3} : \frac{1}{7}$      |  |
| 13    | $\frac{-3}{2} \cdot \frac{4}{9}$ |  |
| 14    | $\frac{1}{3} + \frac{2}{9}$      |  |
| 15    | $\frac{22}{3} : 2$               |  |

TOTAL ENCERTS

# 10 FRACCIONS I DECIMALS

## FRACCIÓ DE DENOMINADOR 10

|       |                                  |  |
|-------|----------------------------------|--|
| DATA: |                                  |  |
| 1     | $\frac{2}{20}$                   |  |
| 2     | $\frac{4}{5}$                    |  |
| 3     | 1                                |  |
| 4     | -5                               |  |
| 5     | $\frac{1}{2}$ de 8               |  |
| 6     | $\frac{1}{5}$ de 10              |  |
| 7     | $7 + \frac{1}{10}$               |  |
| 8     | $3 - \frac{9}{10}$               |  |
| 9     | $\frac{3}{2} + 1$                |  |
| 10    | $2 - \frac{11}{5}$               |  |
| 11    | $\frac{1}{2} + \frac{1}{5}$      |  |
| 12    | $\frac{-9}{5} \cdot \frac{1}{2}$ |  |
| 13    | $\frac{4}{25} \cdot \frac{5}{8}$ |  |
| 14    | $\frac{1}{2} : \frac{5}{13}$     |  |
| 15    | $\frac{2}{3} : \frac{10}{6}$     |  |

TOTAL ENCERTS

# 11 FRACCIONS I DECIMALS

## CALCULEM EL DECIMAL

| DATA: |                          |  |
|-------|--------------------------|--|
| 1     | $0,25 \cdot 6$           |  |
| 2     | $0,45 + 0,35$            |  |
| 3     | $1 - 0,85$               |  |
| 4     | $0,25 - 3$               |  |
| 5     | $\frac{1}{2}$            |  |
| 6     | $\frac{1}{4}$ de 10      |  |
| 7     | $\frac{9}{10}$           |  |
| 8     | $\frac{-3}{4}$           |  |
| 9     | $\frac{20}{100} \cdot 9$ |  |
| 10    | $1 + \frac{3}{2}$        |  |
| 11    | $5 \cdot \frac{1}{4}$    |  |
| 12    | $0,14 \cdot 7$           |  |
| 13    | $\frac{6}{1000}$         |  |
| 14    | $0,16 \cdot (-5)$        |  |
| 15    | $0,1 \cdot 0,3$          |  |

TOTAL ENCERTS

# 12 FRACCIONS I DECIMALS

CALCULEM EL DECIMAL

|       |                           |  |
|-------|---------------------------|--|
| DATA: |                           |  |
| 1     | $0,45 + 1,25$             |  |
| 2     | $0,35 \cdot 2$            |  |
| 3     | $4 - 1,35$                |  |
| 4     | $0,60 - 3$                |  |
| 5     | $\frac{7}{2}$             |  |
| 6     | $\frac{19}{10}$           |  |
| 7     | $\frac{1}{5}$ de 4        |  |
| 8     | $\frac{25}{100} \cdot 30$ |  |
| 9     | $3 - \frac{1}{2}$         |  |
| 10    | $\frac{3}{4}$             |  |
| 11    | $0,14 \cdot 4$            |  |
| 12    | $\frac{7}{100}$           |  |
| 13    | $8 \cdot 0,25$            |  |
| 14    | $0,7 \cdot 0,5$           |  |
| 15    | $0,01 \cdot 0,9$          |  |

TOTAL ENCERTS

13 POTÈNCIES I ARRELS  
CALCULEM

| DATA: |          |  |
|-------|----------|--|
| 1     | $3^2$    |  |
| 2     | $(-3)^2$ |  |
| 3     | $-3^2$   |  |
| 4     | $2^3$    |  |
| 5     | $(-2)^3$ |  |
| 6     | $-2^3$   |  |
| 7     | $5^2$    |  |
| 8     | $(-2)^2$ |  |
| 9     | $-5^2$   |  |
| 10    | $5^3$    |  |
| 11    | $-2^2$   |  |
| 12    | $(-5)^3$ |  |
| 13    | $2^2$    |  |
| 14    | $-5^3$   |  |
| 15    | $(-5)^2$ |  |

TOTAL ENCERTS

# 14 POTÈNCIES I ARRELS CALCULEM

| DATA: |                               |  |
|-------|-------------------------------|--|
| 1     | $(-7)^2$                      |  |
| 2     | $-3^3$                        |  |
| 3     | $\left(\frac{1}{6}\right)^2$  |  |
| 4     | $\left(\frac{3}{2}\right)^2$  |  |
| 5     | $\left(-\frac{1}{2}\right)^2$ |  |
| 6     | $\left(-\frac{1}{5}\right)^3$ |  |
| 7     | $\left(-\frac{3}{2}\right)^4$ |  |
| 8     | $\left(-\frac{5}{3}\right)^3$ |  |
| 9     | $-\left(\frac{1}{4}\right)^2$ |  |
| 10    | $-\frac{1}{2^2}$              |  |
| 11    | $\left(-\frac{2}{5}\right)^3$ |  |
| 12    | $\left(\frac{1}{2}\right)^6$  |  |
| 13    | $\left(-\frac{5}{7}\right)^2$ |  |
| 14    | $\left(-\frac{5}{2}\right)^3$ |  |
| 15    | $\frac{5}{(-2)^3}$            |  |

TOTAL ENCERTS

# 15 POTÈNCIES I ARRELS CALCULEM

| DATA: |                                   |  |
|-------|-----------------------------------|--|
| 1     | $2^{-2}$                          |  |
| 2     | $3^{-1}$                          |  |
| 3     | $5^{-4}$                          |  |
| 4     | $(-7)^{-2}$                       |  |
| 5     | $(-3)^{-3}$                       |  |
| 6     | $\left(\frac{1}{5}\right)^{-3}$   |  |
| 7     | $\left(\frac{1}{4}\right)^{-2}$   |  |
| 8     | $\left(\frac{5}{6}\right)^{-2}$   |  |
| 9     | $\left(\frac{1}{11}\right)^{-1}$  |  |
| 10    | $\left(-\frac{1}{2}\right)^{-2}$  |  |
| 11    | $\left(-\frac{1}{3}\right)^{-3}$  |  |
| 12    | $\left(-\frac{9}{10}\right)^{-2}$ |  |
| 13    | $\left(-\frac{2}{5}\right)^{-3}$  |  |
| 14    | $\left(\frac{4}{3}\right)^{-2}$   |  |
| 15    | $\left(-\frac{8}{7}\right)^{-1}$  |  |

TOTAL ENCERTS

16 POTÈNCIES I ARRELS  
EXPRESSEM EN POTÈNCIA

| DATA: |          |  |
|-------|----------|--|
| 1     | 36       |  |
| 2     | 100 000  |  |
| 3     | 27       |  |
| 4     | 16       |  |
| 5     | 125      |  |
| 6     | -32      |  |
| 7     | 81       |  |
| 8     | 400      |  |
| 9     | -8       |  |
| 10    | 121      |  |
| 11    | 10 000   |  |
| 12    | -1 000   |  |
| 13    | 64       |  |
| 14    | 4900     |  |
| 15    | -100 000 |  |

TOTAL ENCERTS

17 POTÈNCIES I ARRELS  
CALCULEM

| DATA: |               |  |
|-------|---------------|--|
| 1     | $6^2 - 2^4$   |  |
| 2     | $2^3 + 3^2$   |  |
| 3     | $5^2 - 6^2$   |  |
| 4     | $10^2 + 10^3$ |  |
| 5     | $5^2 - 3^3$   |  |
| 6     | $2^4 - 2^3$   |  |
| 7     | $5^2 + 5^3$   |  |
| 8     | $6^2 + 8^2$   |  |
| 9     | $7^2 - 3^2$   |  |
| 10    | $2^5 - 6^2$   |  |
| 11    | $2^6 + 5^2$   |  |
| 12    | $9^2 - 10^2$  |  |
| 13    | $10^3 + 1^5$  |  |
| 14    | $1^7 - 3^4$   |  |
| 15    | $4^3 - 8^2$   |  |

TOTAL ENCERTS

# 18 POTÈNCIES I ARRELS

## APLIQUEM PROPIETATS

| DATA: |                              |  |
|-------|------------------------------|--|
| 1     | $a^4 \cdot a^8$              |  |
| 2     | $a^5 \cdot a^{-3}$           |  |
| 3     | $a^{-1} \cdot a^{-3}$        |  |
| 4     | $a^5 : a^2$                  |  |
| 5     | $a^8 : a^{-2}$               |  |
| 6     | $a^{-9} : a^6$               |  |
| 7     | $a^{-7} : a^{-11}$           |  |
| 8     | $(a^4)^2$                    |  |
| 9     | $(a^2)^{-5}$                 |  |
| 10    | $(a^{-7})^3$                 |  |
| 11    | $(a^{-4})^{-6}$              |  |
| 12    | $a^7 \cdot a^8 : a^9$        |  |
| 13    | $a^3 \cdot a^{-5} : a$       |  |
| 14    | $a^9 : a^{-2} \cdot a^{-11}$ |  |
| 15    | $a^6 : (a^4)^2 \cdot a^3$    |  |

TOTAL ENCERTS

19 POTÈNCIES I ARRELS  
APLIQUEM PROPIETATS

| DATA: |                                |  |
|-------|--------------------------------|--|
| 1     | $a^6 \cdot a^4 : a^{-2}$       |  |
| 2     | $(a^8 : a^5)^2$                |  |
| 3     | $a^{10} : (a^2)^3$             |  |
| 4     | $(a^{11} : a^9)^5$             |  |
| 5     | $(a^9 \cdot a^3) : a^7$        |  |
| 6     | $a^{-8} \cdot (a^3)^5$         |  |
| 7     | $(a^6 : a^7)^{-3}$             |  |
| 8     | $(a^3 \cdot a^{-7})^2 \cdot a$ |  |
| 9     | $a^{15} \cdot (a^{-2})^3$      |  |
| 10    | $(a \cdot a^6) : a^{-4}$       |  |
| 11    | $(a^{-5} \cdot a)^{-2}$        |  |
| 12    | $(a^4 : a^{-1})^{-5}$          |  |
| 13    | $a^{-3} \cdot a^9 : a^6$       |  |
| 14    | $a^7 \cdot (a^6 : a^{11})$     |  |
| 15    | $[(a^{-2})^{-3}]^{-1}$         |  |

TOTAL ENCERTS

## 20 POTÈNCIES I ARRELS

PROPIETATS POTÈNCIES:  
CALCULEM "x"

| DATA: |                             |  |
|-------|-----------------------------|--|
| 1     | $7^2 \cdot 3^2 = x^2$       |  |
| 2     | $2^3 \cdot x^3 = 12^3$      |  |
| 3     | $12^5 : 4^5 = x^5$          |  |
| 4     | $10^4 : x^4 = 5^4$          |  |
| 5     | $x^2 \cdot 6^2 = 48^2$      |  |
| 6     | $x^3 : 2^3 = 7^3$           |  |
| 7     | $(2^x)^5 = 2^{-15}$         |  |
| 8     | $(8^{-3})^x = 8^{12}$       |  |
| 9     | $6^{-3} \cdot 6^x = 6^{-4}$ |  |
| 10    | $9^x : 9^{-1} = 9^5$        |  |
| 11    | $7^x \cdot 7^{-3} = 7^{-8}$ |  |
| 12    | $(5^4)^x = 1$               |  |
| 13    | $10^8 : 10^x = 10$          |  |
| 14    | $2^6 \cdot 2^4 : 2^x = 2^9$ |  |
| 15    | $[(5^2)^{-3}]^x = 5^{24}$   |  |

TOTAL ENCERTS

21 POTÈNCIES I ARRELS  
POTÈNCIES DE BASE 2, 3, 5

| DATA: |                |  |
|-------|----------------|--|
| 1     | 25             |  |
| 2     | 8              |  |
| 3     | 81             |  |
| 4     | 125            |  |
| 5     | 27             |  |
| 6     | 16             |  |
| 7     | $\frac{1}{4}$  |  |
| 8     | $\frac{1}{9}$  |  |
| 9     | 32             |  |
| 10    | 1              |  |
| 11    | 625            |  |
| 12    | 64             |  |
| 13    | 243            |  |
| 14    | $\frac{1}{25}$ |  |
| 15    | 1024           |  |

TOTAL ENCERTS

## 22 POTÈNCIES I ARRELS

### POTÈNCIES DE BASE 2, 3, 5

| DATA: |                  |  |
|-------|------------------|--|
| 1     | $4^3$            |  |
| 2     | $9^4$            |  |
| 3     | $\frac{1}{25}$   |  |
| 4     | $(4^3)^5$        |  |
| 5     | $(9^3)^4$        |  |
| 6     | $(25^2)^3$       |  |
| 7     | $2^4 \cdot 8^3$  |  |
| 8     | $27^2 \cdot 9$   |  |
| 9     | $125 \cdot 25$   |  |
| 10    | $8^4 : 4^3$      |  |
| 11    | $81 : 3^3$       |  |
| 12    | $625 : 25$       |  |
| 13    | $4^6 \cdot 16$   |  |
| 14    | $9^6 : 3^5$      |  |
| 15    | $25^2 \cdot 125$ |  |

TOTAL ENCERTS

## 23 POTÈNCIES I ARRELS

### POTÈNCIES DE BASE 10

| DATA: |                 |  |
|-------|-----------------|--|
| 1     | 10 000          |  |
| 2     | 100             |  |
| 3     | 1               |  |
| 4     | 0,1             |  |
| 5     | 0'01            |  |
| 6     | 0'000001        |  |
| 7     | $100 \cdot 10$  |  |
| 8     | $1\ 000^2$      |  |
| 9     | $10\ 000 : 100$ |  |
| 10    | $10 \cdot 0,1$  |  |
| 11    | $10^8 : 1\ 000$ |  |
| 12    | $10 : 10\ 000$  |  |
| 13    | $0,1 \cdot 0,1$ |  |
| 14    | $1\ 000 : 0,01$ |  |
| 15    | $0,1 : 0,001$   |  |

TOTAL ENCERTS

## 24 POTÈNCIES I ARRELS

### NOTACIÓ CIENTÍFICA

| DATA: |                              |  |
|-------|------------------------------|--|
| 1     | 50 000                       |  |
| 2     | 2 100                        |  |
| 3     | -300                         |  |
| 4     | 0,00001                      |  |
| 5     | 0,004                        |  |
| 6     | 0,67                         |  |
| 7     | -0,000008                    |  |
| 8     | 900                          |  |
| 9     | -120 000                     |  |
| 10    | 0,0044                       |  |
| 11    | $0,0065 \cdot 10$            |  |
| 12    | $3 \cdot 0,1$                |  |
| 13    | $78 \cdot 100$               |  |
| 14    | $5 \cdot 100 \cdot 0,1$      |  |
| 15    | $9 \cdot 10^3 \cdot 10^{-8}$ |  |

TOTAL ENCERTS

## 25 POTÈNCIES I ARRELS OPERACIONS

| DATA: |   |  |
|-------|---|--|
| 1     | $2 \cdot 10^5 + 4 \cdot 10^5$               |  |
| 2     | $9 \cdot 10^4 - 8 \cdot 10^4$               |  |
| 3     | $6 \cdot 10^{-7} + 3 \cdot 10^{-7}$         |  |
| 4     | $7 \cdot 10^{-3} - 5 \cdot 10^{-3}$         |  |
| 5     | $4 \cdot 10^2 - 10^2$                       |  |
| 6     | $1,2 \cdot 10^6 + 3 \cdot 10^6$             |  |
| 7     | $8,7 \cdot 10^2 - 5 \cdot 10^2$             |  |
| 8     | $(4 \cdot 10^9) \cdot (2 \cdot 10^4)$       |  |
| 9     | $(2 \cdot 10^7) \cdot (3 \cdot 10^{-5})$    |  |
| 10    | $(3 \cdot 10^{-2}) \cdot (3 \cdot 10^{-4})$ |  |
| 11    | $(5 \cdot 10^{-6}) \cdot 10^{-3}$           |  |
| 12    | $(8 \cdot 10^6) : (4 \cdot 10^2)$           |  |
| 13    | $(9 \cdot 10^{10}) : (3 \cdot 10^{-5})$     |  |
| 14    | $(6 \cdot 10^{-7}) : (3 \cdot 10^{-3})$     |  |
| 15    | $(7,2 \cdot 10^3) : 10^5$                   |  |

TOTAL ENCERTS

## 26 POTÈNCIES I ARRELS

CALCULEM

| DATA: |                    |  |
|-------|--------------------|--|
| 1     | $\sqrt{25}$        |  |
| 2     | $\sqrt{64}$        |  |
| 3     | $\sqrt{-9}$        |  |
| 4     | $\sqrt[3]{8}$      |  |
| 5     | $\sqrt[3]{-125}$   |  |
| 6     | $\sqrt[4]{81}$     |  |
| 7     | $\sqrt{121}$       |  |
| 8     | $\sqrt[3]{-27}$    |  |
| 9     | $\sqrt[5]{32}$     |  |
| 10    | $\sqrt{169}$       |  |
| 11    | $\sqrt[4]{1\,000}$ |  |
| 12    | $\sqrt[3]{64}$     |  |
| 13    | $\sqrt{144}$       |  |
| 14    | $\sqrt[10]{1}$     |  |
| 15    | $\sqrt{-100}$      |  |

TOTAL ENCERTS

## 27 POTÈNCIES I ARRELS

CALCULEM

| DATA: |                             |  |
|-------|-----------------------------|--|
| 1     | $4 + \sqrt{81}$             |  |
| 2     | $\sqrt{100} - 3^2$          |  |
| 3     | $5 \cdot \sqrt{16}$         |  |
| 4     | $\sqrt{36} : 3$             |  |
| 5     | $-2 + \sqrt{49}$            |  |
| 6     | $7\sqrt{16} - 8$            |  |
| 7     | $9 - 2\sqrt{36}$            |  |
| 8     | $4^2 + \sqrt{64}$           |  |
| 9     | $\sqrt{49} : (-7)$          |  |
| 10    | $10 - 5\sqrt{4}$            |  |
| 11    | $\sqrt{9} - \sqrt{169}$     |  |
| 12    | $\sqrt{400} + 2^3$          |  |
| 13    | $\sqrt{900} : \sqrt{25}$    |  |
| 14    | $\sqrt{16}(\sqrt{81} + 1)$  |  |
| 15    | $(\sqrt{64} - 5)\sqrt{121}$ |  |

TOTAL ENCERTS

## 28 POTÈNCIES I ARRELS

CALCULEM

| DATA: |   |  |
|-------|---|--|
| 1     | $9\sqrt{3} - 4\sqrt{3}$                   |  |
| 2     | $8\sqrt{5} + 2\sqrt{5}$                   |  |
| 3     | $-3\sqrt{7} - \sqrt{7}$                   |  |
| 4     | $9\sqrt{2} - 6\sqrt{2}$                   |  |
| 5     | $2\sqrt{6} \cdot 5\sqrt{5}$               |  |
| 6     | $-4\sqrt{3} \cdot \sqrt{3}$               |  |
| 7     | $7\sqrt{8} \cdot \sqrt{2}$                |  |
| 8     | $20\sqrt{14} : 5\sqrt{7}$                 |  |
| 9     | $18\sqrt{6} : 3\sqrt{2}$                  |  |
| 10    | $4\sqrt{50} : \sqrt{2}$                   |  |
| 11    | $15\sqrt{5} - 7\sqrt{5}$                  |  |
| 12    | $-9\sqrt{2} - 6\sqrt{2}$                  |  |
| 13    | $-3\sqrt{5} \cdot 2\sqrt{11}$             |  |
| 14    | $\sqrt{32} : \sqrt{2}$                    |  |
| 15    | $\sqrt{2} \cdot \sqrt{5} \cdot \sqrt{10}$ |  |

TOTAL ENCERTS