

• **Exercicis**

1. Extraieu factors comuns:

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|------|-------------------|-----|-----------------------------------|
| i. | $7x - 2x + 6x$ | iv. | $a^3b^2c^4 + a^2b^2c^2 - a^4bc^3$ |
| ii. | $24a - 30a + 18a$ | v. | $72x^4z^3 - 180x^2z^2$ |
| iii. | $8x^5 - 12x^3$ | vi. | $2(a + 2b)^3 + 4(a + 2b)^2$ |

2. Simplifiqueu:

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|------|--------------------------------|-----|---|
| i. | $2x - 3x + 5 + 7x - 7 + x$ | iv. | $5ab^2 - 2ab + 15 - 4ab^2 - 40 + ab$ |
| ii. | $10 - 7(x - 1) + x - 2(2 - x)$ | v. | $\frac{k}{2} - \frac{k}{3} + k$ |
| iii. | $3xy + 2 - xy + 5$ | vi. | $\frac{2(a + 4)}{4} + 2a - \frac{a - 8}{2}$ |

3. Desenvolpeu:

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|-----|--------------|------|--------------------------|
| i. | $(4 + 2a)^2$ | iii. | $(5x - 3x^2)(5x + 3x^2)$ |
| ii. | $(2 - 3a)^2$ | iv. | $(6 - 2z)(z + 3)$ |

4. Escriviu en forma de producte:

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|-----|--------------------|------|-----------------------------------|
| i. | $4z^2 - k^2$ | iii. | $\frac{9}{4}x^4y^2 + x^2 - 3x^3y$ |
| ii. | $a^2 + 9b^2 + 6ab$ | iv. | $5x^2 - 20y^2$ |

5. Resoleu les equacions:

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|------|----------------------------|-----|---|
| i. | $3x + 5 = 5x - 7$ | iv. | $z + \frac{20}{100}z = 42$ |
| ii. | $8a + 2 + a = 4 - 3a + 10$ | v. | $\frac{x}{2} + \frac{x}{4} = 1 - x$ |
| iii. | $7 - 2(z - 1) = z + 5$ | vi. | $\frac{k}{4} - \frac{1 - 3k}{6} = 5 + \frac{2k}{3}$ |

• **Solucions**

1.i. $(7 - 2 + 6)x$ 1.ii. $6a(4 - 5 + 3)$ 1.iii. $4x^3(2x^2 - 3)$ 1.iv. $a^2bc^2(abc^2 + b - a^2c)$

1.v. $36x^2z^2(2x^2z - 5)$ 1.vi. $2(a + 2b)^2(a + 2b + 2)$

2.i. $7x - 2$ 2.ii. $13 - 4x$ 2.iii. $2xy + 7$ 2.iv. $ab^2 - ab - 25$ 2.v. $\frac{7k}{6}$ 2.vi. $2a + 6$

3.i. $16 + 16a + 4a^2$ 3.ii. $4 - 12a + 9a^2$ 3.iii. $25x^2 - 9x^4$ 3.iv. $18 - 2z^2$

4.i. $(2z + k)(2z - k)$ 4.ii. $(a + 3b)^2$ 4.iii. $\left(\frac{3x^2y}{2} - x\right)^2$ 4.iv. $5(x + 2y)(x - 2y)$

5.i. $x = 6$ 5.ii. $a = 1$ 5.iii. $z = \frac{4}{3}$ 5.iv. $z = 35$ 5.v. $x = \frac{4}{7}$ 5.vi. $k = 62$