

## Simplification d'Expressions (A)

Simplifiez chaque expression.

1.  $\frac{2c^4}{c^2} \cdot c^2 \cdot 7c$

6.  $7v^2 \cdot 8 \cdot \frac{v^3}{-v^2}$

2.  $\frac{2z^2}{2z} \cdot (-2z^2) \cdot z$

7.  $-\frac{a}{a} \cdot 8a^2 \cdot a^2$

3.  $4z \cdot 4 \cdot (-z) \cdot 9z$

8.  $y \cdot (-y^2) \cdot 8 \cdot y^2$

4.  $-5 \cdot \frac{15}{5} \cdot 4y$

9.  $-v \cdot v \cdot \left(-\frac{48v}{-6v}\right)$

5.  $-\frac{3x^2}{3} \cdot x \cdot 6$

10.  $-v^2 \cdot v \cdot \left(-\frac{10v^4}{10v^2}\right)$

## Simplification d'Expressions (A) Solutions

Simplifiez chaque expression.

$$\begin{aligned} 1. \frac{2c^4}{c^2} \cdot c^2 \cdot 7c \\ = 14c^5 \end{aligned}$$

$$\begin{aligned} 6. 7v^2 \cdot 8 \cdot \frac{v^3}{-v^2} \\ = -56v^3 \end{aligned}$$

$$\begin{aligned} 2. \frac{2z^2}{2z} \cdot (-2z^2) \cdot z \\ = -2z^4 \end{aligned}$$

$$\begin{aligned} 7. -\frac{a}{a} \cdot 8a^2 \cdot a^2 \\ = -8a^4 \end{aligned}$$

$$\begin{aligned} 3. 4z \cdot 4 \cdot (-z) \cdot 9z \\ = -144z^3 \end{aligned}$$

$$\begin{aligned} 8. y \cdot (-y^2) \cdot 8 \cdot y^2 \\ = -8y^5 \end{aligned}$$

$$\begin{aligned} 4. -5 \cdot \frac{15}{5} \cdot 4y \\ = -60y \end{aligned}$$

$$\begin{aligned} 9. -v \cdot v \cdot \left( -\frac{48v}{-6v} \right) \\ = -8v^2 \end{aligned}$$

$$\begin{aligned} 5. -\frac{3x^2}{3} \cdot x \cdot 6 \\ = -6x^3 \end{aligned}$$

$$\begin{aligned} 10. -v^2 \cdot v \cdot \left( -\frac{10v^4}{10v^2} \right) \\ = v^5 \end{aligned}$$

## Simplification d'Expressions (B)

Simplifiez chaque expression.

$$1. z^2 \cdot \frac{9z^2}{-z \cdot (-9z)}$$

$$6. -1 \cdot \left(-\frac{48}{6}\right) \cdot 3z^2$$

$$2. 8b \cdot (-b) \cdot (-9b) \cdot b^2$$

$$7. z^2 \cdot \frac{5z}{5} \cdot z^2$$

$$3. -z \cdot \frac{8z^3}{z^2} \cdot z^2$$

$$8. \frac{36a^4}{-9a^2 \cdot (-a)} \cdot a$$

$$4. -6x^2 \cdot \frac{10x^4}{x \cdot (-10x^2)}$$

$$9. 8c^2 \cdot c^2 \cdot 3c^2 \cdot (-6c^2)$$

$$5. z \cdot \frac{8z^4}{z^2} \cdot (-1)$$

$$10. -u \cdot \frac{u^2}{u} \cdot (-2u)$$

## Simplification d'Expressions (B) Solutions

Simplifiez chaque expression.

$$1. z^2 \cdot \frac{9z^2}{-z \cdot (-9z)} \\ = z^2$$

$$6. -1 \cdot \left(-\frac{48}{6}\right) \cdot 3z^2 \\ = 24z^2$$

$$2. 8b \cdot (-b) \cdot (-9b) \cdot b^2 \\ = 72b^5$$

$$7. z^2 \cdot \frac{5z}{5} \cdot z^2 \\ = z^5$$

$$3. -z \cdot \frac{8z^3}{z^2} \cdot z^2 \\ = -8z^4$$

$$8. \frac{36a^4}{-9a^2 \cdot (-a)} \cdot a \\ = 4a^2$$

$$4. -6x^2 \cdot \frac{10x^4}{x \cdot (-10x^2)} \\ = 6x^3$$

$$9. 8c^2 \cdot c^2 \cdot 3c^2 \cdot (-6c^2) \\ = -144c^8$$

$$5. z \cdot \frac{8z^4}{z^2} \cdot (-1) \\ = -8z^3$$

$$10. -u \cdot \frac{u^2}{u} \cdot (-2u) \\ = 2u^3$$

## Simplification d'Expressions (C)

Simplifiez chaque expression.

1.  $\frac{v^4}{-v^2 \cdot (-v)} \cdot v$

6.  $z^2 \cdot z \cdot (-7) \cdot z$

2.  $\frac{48c^4}{-6 \cdot (-c^2)} \cdot 2c$

7.  $4 \cdot \left(-\frac{v^3}{v^2}\right) \cdot v$

3.  $2v \cdot (-v^2) \cdot 8v \cdot (-9)$

8.  $u \cdot (-u^2) \cdot 5u \cdot 7$

4.  $y^2 \cdot (-5y) \cdot y^2 \cdot y^2$

9.  $\frac{252x^3}{9 \cdot 4x} \cdot x$

5.  $-8a \cdot 10 \cdot a^2 \cdot (-10)$

10.  $7 \cdot (-1) \cdot 4c^2 \cdot (-c^2)$

## Simplification d'Expressions (C) Solutions

Simplifiez chaque expression.

$$1. \frac{v^4}{-v^2 \cdot (-v)} \cdot v \\ = v^2$$

$$6. z^2 \cdot z \cdot (-7) \cdot z \\ = -7z^4$$

$$2. \frac{48c^4}{-6 \cdot (-c^2)} \cdot 2c \\ = 16c^3$$

$$7. 4 \cdot \left(-\frac{v^3}{v^2}\right) \cdot v \\ = -4v^2$$

$$3. 2v \cdot (-v^2) \cdot 8v \cdot (-9) \\ = 144v^4$$

$$8. u \cdot (-u^2) \cdot 5u \cdot 7 \\ = -35u^4$$

$$4. y^2 \cdot (-5y) \cdot y^2 \cdot y^2 \\ = -5y^7$$

$$9. \frac{252x^3}{9 \cdot 4x} \cdot x \\ = 7x^3$$

$$5. -8a \cdot 10 \cdot a^2 \cdot (-10) \\ = 800a^3$$

$$10. 7 \cdot (-1) \cdot 4c^2 \cdot (-c^2) \\ = 28c^4$$

## Simplification d'Expressions (D)

Simplifiez chaque expression.

1.  $v^2 \cdot v \cdot \frac{v}{v}$

6.  $\frac{5y^5}{-y^2 \cdot (-5y^2)} \cdot y^2$

2.  $9c \cdot \frac{6c^3}{6c} \cdot 9c$

7.  $-2u^2 \cdot 9u \cdot \left(-\frac{3u^2}{-u^2}\right)$

3.  $v \cdot v^2 \cdot 3v \cdot (-v^2)$

8.  $9a \cdot 6 \cdot \left(-\frac{a}{-a}\right)$

4.  $b^2 \cdot \frac{9b^3}{b^2 \cdot b}$

9.  $4c^2 \cdot (-2) \cdot (-4c) \cdot 2$

5.  $\frac{14v^6}{7v^2 \cdot (-2) \cdot (-v^2)}$

10.  $y^2 \cdot y \cdot 7 \cdot y^2$

## Simplification d'Expressions (D) Solutions

Simplifiez chaque expression.

$$1. v^2 \cdot v \cdot \frac{v}{v} \\ = v^3$$

$$6. \frac{5y^5}{-y^2 \cdot (-5y^2)} \cdot y^2 \\ = y^3$$

$$2. 9c \cdot \frac{6c^3}{6c} \cdot 9c \\ = 81c^4$$

$$7. -2u^2 \cdot 9u \cdot \left(-\frac{3u^2}{-u^2}\right) \\ = -54u^3$$

$$3. v \cdot v^2 \cdot 3v \cdot (-v^2) \\ = -3v^6$$

$$8. 9a \cdot 6 \cdot \left(-\frac{a}{-a}\right) \\ = 54a$$

$$4. b^2 \cdot \frac{9b^3}{b^2 \cdot b} \\ = 9b^2$$

$$9. 4c^2 \cdot (-2) \cdot (-4c) \cdot 2 \\ = 64c^3$$

$$5. \frac{14v^6}{7v^2 \cdot (-2) \cdot (-v^2)} \\ = v^2$$

$$10. y^2 \cdot y \cdot 7 \cdot y^2 \\ = 7y^5$$



## Simplification d'Expressions (E)

Simplifiez chaque expression.

1.  $5b^2 \cdot (-b^2) \cdot b \cdot (-b)$

6.  $v \cdot v \cdot (-4) \cdot 9v^2$

2.  $10c \cdot 8c \cdot 6 \cdot (-9)$

7.  $-1 \cdot (-b^2) \cdot (-2b) \cdot (-1)$

3.  $7a^2 \cdot \frac{7a^3}{a^2} \cdot (-7)$

8.  $-6z^2 \cdot \left(-\frac{10z^2}{-z^2}\right) \cdot (-7z)$

4.  $b^2 \cdot 5b^2 \cdot \left(-\frac{3b^3}{-b}\right)$

9.  $-3 \cdot (-4y) \cdot 4y \cdot 3y$

5.  $\frac{24x^4}{3x^2 \cdot (-1) \cdot 8}$

10.  $-z \cdot 5 \cdot \left(-\frac{3z^2}{z}\right)$

## Simplification d'Expressions (E) Solutions

Simplifiez chaque expression.

$$\begin{aligned} 1. & 5b^2 \cdot (-b^2) \cdot b \cdot (-b) \\ & = 5b^6 \end{aligned}$$

$$\begin{aligned} 6. & v \cdot v \cdot (-4) \cdot 9v^2 \\ & = -36v^4 \end{aligned}$$

$$\begin{aligned} 2. & 10c \cdot 8c \cdot 6 \cdot (-9) \\ & = -4320c^2 \end{aligned}$$

$$\begin{aligned} 7. & -1 \cdot (-b^2) \cdot (-2b) \cdot (-1) \\ & = 2b^3 \end{aligned}$$

$$\begin{aligned} 3. & 7a^2 \cdot \frac{7a^3}{a^2} \cdot (-7) \\ & = -343a^3 \end{aligned}$$

$$\begin{aligned} 8. & -6z^2 \cdot \left(-\frac{10z^2}{-z^2}\right) \cdot (-7z) \\ & = 420z^3 \end{aligned}$$

$$\begin{aligned} 4. & b^2 \cdot 5b^2 \cdot \left(-\frac{3b^3}{-b}\right) \\ & = 15b^6 \end{aligned}$$

$$\begin{aligned} 9. & -3 \cdot (-4y) \cdot 4y \cdot 3y \\ & = 144y^3 \end{aligned}$$

$$\begin{aligned} 5. & \frac{24x^4}{3x^2 \cdot (-1) \cdot 8} \\ & = -x^2 \end{aligned}$$

$$\begin{aligned} 10. & -z \cdot 5 \cdot \left(-\frac{3z^2}{z}\right) \\ & = 15z^2 \end{aligned}$$

## Simplification d'Expressions (F)

Simplifiez chaque expression.

$$1. -\frac{64a^5}{8a^2 \cdot 4 \cdot 2a}$$

$$6. \frac{a^3}{a} \cdot 2a \cdot 10a$$

$$2. v \cdot v^2 \cdot \left(-\frac{9v^3}{9v}\right)$$

$$7. \frac{8x^2}{-x} \cdot (-1) \cdot 7x^2$$

$$3. \frac{16v^5}{2v \cdot 4v^2 \cdot (-v)}$$

$$8. a \cdot a^2 \cdot \frac{16a}{8a}$$

$$4. 4v^2 \cdot v \cdot v^2 \cdot (-6v^2)$$

$$9. -\frac{5x^4}{-x^2 \cdot 5x^2} \cdot 4x$$

$$5. 7v \cdot \left(-\frac{2v^4}{2v^2}\right) \cdot v$$

$$10. 4a \cdot (-a) \cdot a^2 \cdot 2$$

## Simplification d'Expressions (F) Solutions

Simplifiez chaque expression.

$$\begin{aligned} 1. & -\frac{64a^5}{8a^2 \cdot 4 \cdot 2a} \\ & = -a^2 \end{aligned}$$

$$\begin{aligned} 6. & \frac{a^3}{a} \cdot 2a \cdot 10a \\ & = 20a^4 \end{aligned}$$

$$\begin{aligned} 2. & v \cdot v^2 \cdot \left(-\frac{9v^3}{9v}\right) \\ & = -v^5 \end{aligned}$$

$$\begin{aligned} 7. & \frac{8x^2}{-x} \cdot (-1) \cdot 7x^2 \\ & = 56x^3 \end{aligned}$$

$$\begin{aligned} 3. & \frac{16v^5}{2v \cdot 4v^2 \cdot (-v)} \\ & = -2v \end{aligned}$$

$$\begin{aligned} 8. & a \cdot a^2 \cdot \frac{16a}{8a} \\ & = 2a^3 \end{aligned}$$

$$\begin{aligned} 4. & 4v^2 \cdot v \cdot v^2 \cdot (-6v^2) \\ & = -24v^7 \end{aligned}$$

$$\begin{aligned} 9. & -\frac{5x^4}{-x^2 \cdot 5x^2} \cdot 4x \\ & = 4x \end{aligned}$$

$$\begin{aligned} 5. & 7v \cdot \left(-\frac{2v^4}{2v^2}\right) \cdot v \\ & = -7v^4 \end{aligned}$$

$$\begin{aligned} 10. & 4a \cdot (-a) \cdot a^2 \cdot 2 \\ & = -8a^4 \end{aligned}$$

## Simplification d'Expressions (G)

Simplifiez chaque expression.

$$1. z^2 \cdot \left( -\frac{5z^3}{-1 \cdot z} \right)$$

$$6. y^2 \cdot \left( -\frac{42y^3}{-6y^2} \right) \cdot (-y)$$

$$2. 3v^2 \cdot v \cdot \left( -\frac{5v^3}{-5v} \right)$$

$$7. 4x^2 \cdot (-1) \cdot x^2 \cdot (-9)$$

$$3. c \cdot \frac{5c^4}{c^2} \cdot c$$

$$8. 8v \cdot 2v \cdot \left( -\frac{v^4}{v^2} \right)$$

$$4. v \cdot v \cdot \frac{v}{v}$$

$$9. 7u^2 \cdot 10u^2 \cdot u^2 \cdot 5u^2$$

$$5. -\frac{4b^4}{-b^2 \cdot b} \cdot 7b$$

$$10. 7z \cdot (-4z^2) \cdot \frac{6z}{6z}$$

## Simplification d'Expressions (G) Solutions

Simplifiez chaque expression.

$$1. z^2 \cdot \left( -\frac{5z^3}{-1 \cdot z} \right) \\ = 5z^4$$

$$6. y^2 \cdot \left( -\frac{42y^3}{-6y^2} \right) \cdot (-y) \\ = -7y^4$$

$$2. 3v^2 \cdot v \cdot \left( -\frac{5v^3}{-5v} \right) \\ = 3v^5$$

$$7. 4x^2 \cdot (-1) \cdot x^2 \cdot (-9) \\ = 36x^4$$

$$3. c \cdot \frac{5c^4}{c^2} \cdot c \\ = 5c^4$$

$$8. 8v \cdot 2v \cdot \left( -\frac{v^4}{v^2} \right) \\ = -16v^4$$

$$4. v \cdot v \cdot \frac{v}{v} \\ = v^2$$

$$9. 7u^2 \cdot 10u^2 \cdot u^2 \cdot 5u^2 \\ = 350u^8$$

$$5. -\frac{4b^4}{-b^2 \cdot b} \cdot 7b \\ = 28b^2$$

$$10. 7z \cdot (-4z^2) \cdot \frac{6z}{6z} \\ = -28z^3$$

## Simplification d'Expressions (H)

Simplifiez chaque expression.

1.  $\frac{4c^4}{4c^2} \cdot (-c) \cdot 4c$

6.  $-1 \cdot 7 \cdot 8u^2 \cdot u$

2.  $-y^2 \cdot (-1) \cdot 7 \cdot y^2$

7.  $2 \cdot (-5) \cdot \left(-\frac{10y}{-10}\right)$

3.  $y \cdot (-y^2) \cdot y \cdot (-1)$

8.  $\frac{7v^3}{7v} \cdot v \cdot 10v^2$

4.  $-7y^2 \cdot 6y \cdot (-8) \cdot 10y$

9.  $-1 \cdot b^2 \cdot (-b) \cdot (-8b)$

5.  $-x \cdot \frac{x}{x} \cdot x^2$

10.  $\frac{18z^7}{9z^2 \cdot z^2 \cdot z}$

## Simplification d'Expressions (H) Solutions

Simplifiez chaque expression.

$$\begin{aligned} 1. \quad & \frac{4c^4}{4c^2} \cdot (-c) \cdot 4c \\ & = -4c^4 \end{aligned}$$

$$\begin{aligned} 6. \quad & -1 \cdot 7 \cdot 8u^2 \cdot u \\ & = -56u^3 \end{aligned}$$

$$\begin{aligned} 2. \quad & -y^2 \cdot (-1) \cdot 7 \cdot y^2 \\ & = 7y^4 \end{aligned}$$

$$\begin{aligned} 7. \quad & 2 \cdot (-5) \cdot \left(-\frac{10y}{-10}\right) \\ & = -10y \end{aligned}$$

$$\begin{aligned} 3. \quad & y \cdot (-y^2) \cdot y \cdot (-1) \\ & = y^4 \end{aligned}$$

$$\begin{aligned} 8. \quad & \frac{7v^3}{7v} \cdot v \cdot 10v^2 \\ & = 10v^5 \end{aligned}$$

$$\begin{aligned} 4. \quad & -7y^2 \cdot 6y \cdot (-8) \cdot 10y \\ & = 3360y^4 \end{aligned}$$

$$\begin{aligned} 9. \quad & -1 \cdot b^2 \cdot (-b) \cdot (-8b) \\ & = -8b^4 \end{aligned}$$

$$\begin{aligned} 5. \quad & -x \cdot \frac{x}{x} \cdot x^2 \\ & = -x^3 \end{aligned}$$

$$\begin{aligned} 10. \quad & \frac{18z^7}{9z^2 \cdot z^2 \cdot z} \\ & = 2z^2 \end{aligned}$$



## Simplification d'Expressions (I)

Simplifiez chaque expression.

1.  $5 \cdot \left(-\frac{c^2}{-c}\right) \cdot (-c^2)$

6.  $-c^2 \cdot (-1) \cdot \frac{8c^3}{8c^2}$

2.  $-x \cdot x \cdot (-2x^2) \cdot 3x^2$

7.  $v^2 \cdot (-1) \cdot (-9) \cdot (-1)$

3.  $\frac{50y^3}{y \cdot (-5y)} \cdot 5$

8.  $-c \cdot (-c) \cdot 5 \cdot c$

4.  $c^2 \cdot (-c^2) \cdot (-9) \cdot 9c^2$

9.  $c \cdot 10 \cdot (-c^2) \cdot (-6c^2)$

5.  $-4x^2 \cdot (-6x) \cdot \frac{6x^3}{6x^2}$

10.  $-\frac{6z^3}{-6z} \cdot 10z \cdot 10z$

## Simplification d'Expressions (I) Solutions

Simplifiez chaque expression.

$$\begin{aligned} 1. & 5 \cdot \left( -\frac{c^2}{-c} \right) \cdot (-c^2) \\ &= -5c^3 \end{aligned}$$

$$\begin{aligned} 6. & -c^2 \cdot (-1) \cdot \frac{8c^3}{8c^2} \\ &= c^3 \end{aligned}$$

$$\begin{aligned} 2. & -x \cdot x \cdot (-2x^2) \cdot 3x^2 \\ &= 6x^6 \end{aligned}$$

$$\begin{aligned} 7. & v^2 \cdot (-1) \cdot (-9) \cdot (-1) \\ &= -9v^2 \end{aligned}$$

$$\begin{aligned} 3. & \frac{50y^3}{y \cdot (-5y)} \cdot 5 \\ &= -50y \end{aligned}$$

$$\begin{aligned} 8. & -c \cdot (-c) \cdot 5 \cdot c \\ &= 5c^3 \end{aligned}$$

$$\begin{aligned} 4. & c^2 \cdot (-c^2) \cdot (-9) \cdot 9c^2 \\ &= 81c^6 \end{aligned}$$

$$\begin{aligned} 9. & c \cdot 10 \cdot (-c^2) \cdot (-6c^2) \\ &= 60c^5 \end{aligned}$$

$$\begin{aligned} 5. & -4x^2 \cdot (-6x) \cdot \frac{6x^3}{6x^2} \\ &= 24x^4 \end{aligned}$$

$$\begin{aligned} 10. & -\frac{6z^3}{-6z} \cdot 10z \cdot 10z \\ &= 100z^4 \end{aligned}$$

## Simplification d'Expressions (J)

Simplifiez chaque expression.

1.  $-1 \cdot c^2 \cdot 8c^2 \cdot c^2$

6.  $-4v \cdot (-8v) \cdot v^2 \cdot v$

2.  $\frac{y^2}{-1} \cdot 3y \cdot y$

7.  $\frac{140b^5}{4 \cdot 5b^2 \cdot b}$

3.  $5z^2 \cdot z^2 \cdot \left(-\frac{10z}{10z}\right)$

8.  $\frac{50c^5}{5c \cdot 10c \cdot c^2}$

4.  $u \cdot 9 \cdot u \cdot u^2$

9.  $c^2 \cdot (-6c^2) \cdot \frac{c^3}{c}$

5.  $\frac{z^4}{z \cdot (-z^2) \cdot (-1)}$

10.  $y \cdot \frac{10y^2}{y} \cdot 5y$

## Simplification d'Expressions (J) Solutions

Simplifiez chaque expression.

$$1. -1 \cdot c^2 \cdot 8c^2 \cdot c^2 \\ = -8c^6$$

$$6. -4v \cdot (-8v) \cdot v^2 \cdot v \\ = 32v^5$$

$$2. \frac{y^2}{-1} \cdot 3y \cdot y \\ = -3y^4$$

$$7. \frac{140b^5}{4 \cdot 5b^2 \cdot b} \\ = 7b^2$$

$$3. 5z^2 \cdot z^2 \cdot \left(-\frac{10z}{10z}\right) \\ = -5z^4$$

$$8. \frac{50c^5}{\underline{5c} \cdot 10c \cdot c^2}$$

$$4. u \cdot 9 \cdot u \cdot u^2 \\ = 9u^4$$

$$9. c^2 \cdot (-6c^2) \cdot \frac{c^3}{c} \\ = -6c^6$$

$$5. \frac{z^4}{z \cdot (-z^2) \cdot (-1)} \\ = z$$

$$10. y \cdot \frac{10y^2}{y} \cdot 5y \\ = 50y^3$$