

Simplification d'Expressions (A)

Simplifiez chaque expression.

1. $-\frac{36}{-6} \cdot 2u \cdot 3$

6. $b^2 \cdot u^2 \cdot \frac{7u}{7}$

2. $-1 \cdot x \cdot 6x^2 \cdot (-x)$

7. $\frac{c^2y}{cy} \cdot 2y^2 \cdot 8$

3. $-\frac{40ac^2}{5ac \cdot (-8c)} \cdot (-3a^2)$

8. $-\frac{9u^5}{u \cdot (-9u^2)} \cdot 7c$

4. $v^2 \cdot \left(-\frac{27v}{-1 \cdot 9v}\right)$

9. $5v \cdot (-a) \cdot v \cdot 7av$

5. $3v \cdot \frac{40av}{v \cdot 8}$

10. $-9 \cdot b^2 \cdot \left(-\frac{a^2}{a^2}\right)$

Simplification d'Expressions (A) Solutions

Simplifiez chaque expression.

$$\begin{aligned} 1. & -\frac{36}{-6} \cdot 2u \cdot 3 \\ & = 36u \end{aligned}$$

$$\begin{aligned} 6. & b^2 \cdot u^2 \cdot \frac{7u}{7} \\ & = b^2u^3 \end{aligned}$$

$$\begin{aligned} 2. & -1 \cdot x \cdot 6x^2 \cdot (-x) \\ & = 6x^4 \end{aligned}$$

$$\begin{aligned} 7. & \frac{c^2y}{cy} \cdot 2y^2 \cdot 8 \\ & = 16cy^2 \end{aligned}$$

$$\begin{aligned} 3. & -\frac{40ac^2}{5ac \cdot (-8c)} \cdot (-3a^2) \\ & = -3a^2 \end{aligned}$$

$$\begin{aligned} 8. & -\frac{9u^5}{u \cdot (-9u^2)} \cdot 7c \\ & = 7cu^2 \end{aligned}$$

$$\begin{aligned} 4. & v^2 \cdot \left(-\frac{27v}{-1 \cdot 9v} \right) \\ & = 3v^2 \end{aligned}$$

$$\begin{aligned} 9. & 5v \cdot (-a) \cdot v \cdot 7av \\ & = -35a^2v^3 \end{aligned}$$

$$\begin{aligned} 5. & 3v \cdot \frac{40av}{v \cdot 8} \\ & = 15av \end{aligned}$$

$$\begin{aligned} 10. & -9 \cdot b^2 \cdot \left(-\frac{a^2}{a^2} \right) \\ & = 9b^2 \end{aligned}$$

Simplification d'Expressions (B)

Simplifiez chaque expression.

1. $x^2 \cdot v \cdot (-1) \cdot (-2)$

6. $2v \cdot 5vy \cdot (-vy) \cdot (-7vy)$

2. $-\frac{20c^5y^2}{5c \cdot cy \cdot (-c^2)}$

7. $u^2 \cdot (-u^2) \cdot (-y^2) \cdot (-4uy)$

3. $\frac{20u^3y^2}{y \cdot 10uy} \cdot y^2$

8. $-\frac{10b^2v^2}{2b \cdot 5bv} \cdot bv$

4. $-4u \cdot (-8v) \cdot (-5) \cdot uv$

9. $10bc \cdot \frac{35b^2c^3}{c^2 \cdot 7b}$

5. $-\frac{24a^2}{8a} \cdot 3a \cdot (-10)$

10. $7y \cdot \frac{9vy}{y} \cdot 9$

Simplification d'Expressions (B) Solutions

Simplifiez chaque expression.

$$\begin{aligned} 1. x^2 \cdot v \cdot (-1) \cdot (-2) \\ = 2vx^2 \end{aligned}$$

$$\begin{aligned} 6. 2v \cdot 5vy \cdot (-vy) \cdot (-7vy) \\ = 70v^4y^3 \end{aligned}$$

$$\begin{aligned} 2. -\frac{20c^5y^2}{5c \cdot cy \cdot (-c^2)} \\ = 4cy \end{aligned}$$

$$\begin{aligned} 7. u^2 \cdot (-u^2) \cdot (-y^2) \cdot (-4uy) \\ = -4u^5y^3 \end{aligned}$$

$$\begin{aligned} 3. \frac{20u^3y^2}{y \cdot 10uy} \cdot y^2 \\ = 2u^2y^2 \end{aligned}$$

$$\begin{aligned} 8. -\frac{10b^2v^2}{2b \cdot 5bv} \cdot bv \\ = -bv^2 \end{aligned}$$

$$\begin{aligned} 4. -4u \cdot (-8v) \cdot (-5) \cdot uv \\ = -160u^2v^2 \end{aligned}$$

$$\begin{aligned} 9. 10bc \cdot \frac{35b^2c^3}{c^2 \cdot 7b} \\ = 50b^2c^2 \end{aligned}$$

$$\begin{aligned} 5. -\frac{24a^2}{8a} \cdot 3a \cdot (-10) \\ = 90a^2 \end{aligned}$$

$$\begin{aligned} 10. 7y \cdot \frac{9vy}{y} \cdot 9 \\ = 567vy \end{aligned}$$

Simplification d'Expressions (C)

Simplifiez chaque expression.

1. $vy \cdot 6 \cdot 3 \cdot 8v^2$

6. $-2 \cdot \left(-\frac{36b^3}{-4b^2}\right) \cdot z$

2. $-9b^2 \cdot (-bv) \cdot 4b^2 \cdot (-1)$

7. $y^2 \cdot (-y) \cdot \frac{15z}{3z}$

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

8. $5bc \cdot 8b \cdot bc \cdot 10bc$

4. $-\frac{25c^2}{5c^2 \cdot (-5)} \cdot c^2$

9. $-1 \cdot (-2b^2) \cdot \left(-\frac{15x^2}{5x}\right)$

5. $cy \cdot 6cy \cdot \frac{4y}{-1}$

10. $v \cdot 9 \cdot v \cdot (-v)$

Simplification d'Expressions (C) Solutions

Simplifiez chaque expression.

$$\begin{aligned} 1. & \quad vy \cdot 6 \cdot 3 \cdot 8v^2 \\ & = 144v^3y \end{aligned}$$

$$\begin{aligned} 6. & \quad -2 \cdot \left(-\frac{36b^3}{-4b^2} \right) \cdot z \\ & = -18bz \end{aligned}$$

$$\begin{aligned} 2. & \quad -9b^2 \cdot (-bv) \cdot 4b^2 \cdot (-1) \\ & = -36b^5v \end{aligned}$$

$$\begin{aligned} 7. & \quad y^2 \cdot (-y) \cdot \frac{15z}{3z} \\ & = -5y^3 \end{aligned}$$

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

$$\begin{aligned} 8. & \quad 5bc \cdot 8b \cdot bc \cdot 10bc \\ & = 400b^4c^3 \end{aligned}$$

$$\begin{aligned} 4. & \quad -\frac{25c^2}{5c^2 \cdot (-5)} \cdot c^2 \\ & = c^2 \end{aligned}$$

$$\begin{aligned} 9. & \quad -1 \cdot (-2b^2) \cdot \left(-\frac{15x^2}{5x} \right) \\ & = -6b^2x \end{aligned}$$

$$\begin{aligned} 5. & \quad cy \cdot 6cy \cdot \frac{4y}{-1} \\ & = -24c^2y^3 \end{aligned}$$

$$\begin{aligned} 10. & \quad v \cdot 9 \cdot v \cdot (-v) \\ & = -9v^3 \end{aligned}$$

Simplification d'Expressions (D)

Simplifiez chaque expression.

1. $-1 \cdot 3y^2 \cdot (-yz) \cdot 7$

6. $b \cdot 7bu \cdot (-b) \cdot (-u)$

2. $\frac{9a^7}{a^2 \cdot a^2 \cdot 9a}$

7. $-4a \cdot v^2 \cdot 2v \cdot (-1)$

3. $7x^2 \cdot 7x \cdot 10 \cdot x$

8. $-v \cdot 8b \cdot 9b \cdot v^2$

4. $u^2 \cdot (-10v^2) \cdot \frac{70uv^2}{10uv}$

9. $-5b \cdot (-8) \cdot (-7z^2) \cdot 5z$

5. $y^2 \cdot (-y) \cdot y \cdot (-9)$

10. $-5b \cdot \frac{36b}{6 \cdot 2}$

Simplification d'Expressions (D) Solutions

Simplifiez chaque expression.

$$\begin{aligned} 1. & -1 \cdot 3y^2 \cdot (-yz) \cdot 7 \\ & = 21y^3z \end{aligned}$$

$$\begin{aligned} 6. & b \cdot 7bu \cdot (-b) \cdot (-u) \\ & = 7b^3u^2 \end{aligned}$$

$$\begin{aligned} 2. & \frac{9a^7}{a^2 \cdot a^2 \cdot 9a} \\ & = a^2 \end{aligned}$$

$$\begin{aligned} 7. & -4a \cdot v^2 \cdot 2v \cdot (-1) \\ & = 8av^3 \end{aligned}$$

$$\begin{aligned} 3. & 7x^2 \cdot 7x \cdot 10 \cdot x \\ & = 490x^4 \end{aligned}$$

$$\begin{aligned} 8. & -v \cdot 8b \cdot 9b \cdot v^2 \\ & = -72b^2v^3 \end{aligned}$$

$$\begin{aligned} 4. & u^2 \cdot (-10v^2) \cdot \frac{70uv^2}{10uv} \\ & = -70u^2v^3 \end{aligned}$$

$$\begin{aligned} 9. & -5b \cdot (-8) \cdot (-7z^2) \cdot 5z \\ & = -1400bz^3 \end{aligned}$$

$$\begin{aligned} 5. & y^2 \cdot (-y) \cdot y \cdot (-9) \\ & = 9y^4 \end{aligned}$$

$$\begin{aligned} 10. & -5b \cdot \frac{36b}{6 \cdot 2} \\ & = -15b^2 \end{aligned}$$

Simplification d'Expressions (E)

Simplifiez chaque expression.

1. $-\frac{16a^3x^2}{x \cdot 4 \cdot (-ax)}$

6. $-5 \cdot (-5bx) \cdot 3x^2 \cdot (-x)$

2. $9b \cdot 9b^2 \cdot (-5b^2) \cdot (-6)$

7. $u \cdot 8u^2 \cdot (-2uz) \cdot 3u$

3. $8y \cdot y \cdot (-7x) \cdot 2x$

8. $-8 \cdot (-4) \cdot (-z^2) \cdot (-2b^2)$

4. $10v^2 \cdot \left(-\frac{c^3v}{c \cdot (-cv)} \right)$

9. $-\frac{72b^4c^2}{-b^2 \cdot (-9bc) \cdot 8b}$

5. $cv \cdot v^2 \cdot 6cv \cdot 8$

10. $c \cdot \left(-\frac{cy}{-1} \right) \cdot (-4c)$

Simplification d'Expressions (E) Solutions

Simplifiez chaque expression.

$$1. \frac{16a^3x^2}{x \cdot 4 \cdot (-ax)} \\ = 4a^2$$

$$6. -5 \cdot (-5bx) \cdot 3x^2 \cdot (-x) \\ = -75bx^4$$

$$2. 9b \cdot 9b^2 \cdot (-5b^2) \cdot (-6) \\ = 2430b^5$$

$$7. u \cdot 8u^2 \cdot (-2uz) \cdot 3u \\ = -48u^5z$$

$$3. 8y \cdot y \cdot (-7x) \cdot 2x \\ = -112x^2y^2$$

$$8. -8 \cdot (-4) \cdot (-z^2) \cdot (-2b^2) \\ = 64b^2z^2$$

$$4. 10v^2 \cdot \left(-\frac{c^3v}{c \cdot (-cv)} \right) \\ = 10cv^2$$

$$9. \frac{72b^4c^2}{-b^2 \cdot (-9bc) \cdot 8b} \\ = -c$$

$$5. cv \cdot v^2 \cdot 6cv \cdot 8 \\ = 48c^2v^4$$

$$10. c \cdot \left(-\frac{cy}{-1} \right) \cdot (-4c) \\ = -4c^3y$$

Simplification d'Expressions (F)

Simplifiez chaque expression.

1. $10 \cdot (-1) \cdot (-4b) \cdot 3$

6. $y \cdot 3 \cdot \left(-\frac{cy}{-c}\right)$

2. $v \cdot \frac{35}{7} \cdot 2b$

7. $z^2 \cdot (-c) \cdot (-1) \cdot (-3c^2)$

3. $10xz \cdot (-4) \cdot (-xz) \cdot (-4x)$

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

4. $10az \cdot \frac{135az^3}{9z \cdot 3z}$

9. $3cu \cdot \frac{8c^4u^2}{2cu \cdot 4c^2}$

5. $v \cdot (-3uv) \cdot uv \cdot u$

10. $9ay \cdot a \cdot a \cdot (-ay)$

Simplification d'Expressions (F) Solutions

Simplifiez chaque expression.

$$1. 10 \cdot (-1) \cdot (-4b) \cdot 3 \\ = 120b$$

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

$$2. v \cdot \frac{35}{7} \cdot 2b \\ = 10bv$$

$$7. z^2 \cdot (-c) \cdot (-1) \cdot (-3c^2) \\ = -3c^3z^2$$

$$3. 10xz \cdot (-4) \cdot (-xz) \cdot (-4x) \\ = -160x^3z^2$$

$$8. 7y^2 \cdot y^2 \cdot (-y) \cdot y^2 \\ = -7y^7$$

$$4. 10az \cdot \frac{135az^3}{9z \cdot 3z} \\ = 50a^2z^2$$

$$9. 3cu \cdot \frac{8c^4u^2}{2cu \cdot 4c^2} \\ = 3c^2u^2$$

$$5. v \cdot (-3uv) \cdot uv \cdot u \\ = -3u^3v^3$$

$$10. 9ay \cdot a \cdot a \cdot (-ay) \\ = -9a^4y^2$$

Simplification d'Expressions (G)

Simplifiez chaque expression.

1. $-y \cdot (-3) \cdot u^2 \cdot (-6)$

6. $4az \cdot (-2) \cdot z \cdot 2$

2. $-c \cdot (-2) \cdot (-9) \cdot (-z)$

7. $b \cdot 9 \cdot bx \cdot b$

3. $\frac{6b^4}{b \cdot 6b^2} \cdot b$

8. $-\frac{9a^2x^3}{-x^2 \cdot (-9a)} \cdot 4a$

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

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

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

10. $3z \cdot \left(-\frac{4b}{-1}\right) \cdot b$

Simplification d'Expressions (G) Solutions

Simplifiez chaque expression.

$$\begin{aligned} 1. & -y \cdot (-3) \cdot u^2 \cdot (-6) \\ & = -18u^2y \end{aligned}$$

$$\begin{aligned} 6. & 4az \cdot (-2) \cdot z \cdot 2 \\ & = -16az^2 \end{aligned}$$

$$\begin{aligned} 2. & -c \cdot (-2) \cdot (-9) \cdot (-z) \\ & = 18cz \end{aligned}$$

$$\begin{aligned} 7. & b \cdot 9 \cdot bx \cdot b \\ & = 9b^3x \end{aligned}$$

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

$$\begin{aligned} 8. & -\frac{9a^2x^3}{-x^2 \cdot (-9a)} \cdot 4a \\ & = -4a^2x \end{aligned}$$

$$\begin{aligned} 4. & -b^2 \cdot 2b \cdot 5 \cdot (-b) \\ & = 10b^4 \end{aligned}$$

$$\begin{aligned} 9. & c \cdot (-c) \cdot \frac{6c^2z}{6cz} \\ & = -c^3 \end{aligned}$$

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

$$\begin{aligned} 10. & 3z \cdot \left(-\frac{4b}{-1} \right) \cdot b \\ & = 12b^2z \end{aligned}$$

Simplification d'Expressions (H)

Simplifiez chaque expression.

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

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

2. $-4u^2 \cdot a^2 \cdot 5a^2 \cdot (-8a)$

7. $-\frac{5c^2u^2}{-cu} \cdot cu \cdot 7u^2$

3. $-\frac{a^2x^4}{ax \cdot x \cdot (-x)}$

8. $\frac{80u^2y^2}{u \cdot u \cdot 10}$

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

9. $\frac{4b^3}{2b^2} \cdot bx \cdot (-1)$

5. $\frac{6}{6} \cdot uv \cdot uv$

10. $uz \cdot 2uz \cdot z^2 \cdot z^2$

Simplification d'Expressions (H) Solutions

Simplifiez chaque expression.

$$\begin{aligned} 1. & -\frac{7u^4}{u^2} \cdot 7c \cdot u \\ & = -49cu^3 \end{aligned}$$

$$\begin{aligned} 6. & -9 \cdot \left(-\frac{6}{-6}\right) \cdot (-ab) \\ & = 9ab \end{aligned}$$

$$\begin{aligned} 2. & -4u^2 \cdot a^2 \cdot 5a^2 \cdot (-8a) \\ & = 160a^5u^2 \end{aligned}$$

$$\begin{aligned} 7. & -\frac{5c^2u^2}{-cu} \cdot cu \cdot 7u^2 \\ & = 35c^2u^4 \end{aligned}$$

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

$$\begin{aligned} 8. & \frac{80u^2y^2}{u \cdot u \cdot 10} \\ & = 8y^2 \end{aligned}$$

$$\begin{aligned} 4. & -5y \cdot (-by) \cdot (-by) \cdot (-y^2) \\ & = 5b^2y^5 \end{aligned}$$

$$\begin{aligned} 9. & \frac{4b^3}{2b^2} \cdot bx \cdot (-1) \\ & = -2b^2x \end{aligned}$$

$$\begin{aligned} 5. & \frac{6}{6} \cdot uv \cdot uv \\ & = u^2v^2 \end{aligned}$$

$$\begin{aligned} 10. & uz \cdot 2uz \cdot z^2 \cdot z^2 \\ & = 2u^2z^6 \end{aligned}$$

Simplification d'Expressions (I)

Simplifiez chaque expression.

$$1. -\frac{2a^2y}{ay \cdot (-1)} \cdot (-y)$$

$$6. v \cdot 2 \cdot 5v^2 \cdot v$$

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

$$7. 10x \cdot u \cdot \frac{x^2}{x}$$

$$3. z \cdot 9cz \cdot (-4) \cdot z^2$$

$$8. -8 \cdot \frac{21cu^3}{3u^2 \cdot (-1)}$$

$$4. -1 \cdot (-6xz) \cdot \left(-\frac{xz}{-xz}\right)$$

$$9. \frac{32uv}{8v} \cdot (-5) \cdot u$$

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

$$10. ac \cdot a \cdot (-c) \cdot 4a$$

Simplification d'Expressions (I) Solutions

Simplifiez chaque expression.

$$\begin{aligned} 1. & -\frac{2a^2y}{ay \cdot (-1)} \cdot (-y) \\ & = -2ay \end{aligned}$$

$$\begin{aligned} 6. & v \cdot 2 \cdot 5y^2 \cdot v \\ & = 10v^4 \end{aligned}$$

$$\begin{aligned} 2. & -\frac{10b^2}{-b} \cdot 4b \cdot (-6) \\ & = -240b^2 \end{aligned}$$

$$\begin{aligned} 7. & 10x \cdot u \cdot \frac{x^2}{x} \\ & = 10ux^2 \end{aligned}$$

$$\begin{aligned} 3. & z \cdot 9cz \cdot (-4) \cdot z^2 \\ & = -36cz^4 \end{aligned}$$

$$\begin{aligned} 8. & -8 \cdot \frac{21cu^3}{3u^2 \cdot (-1)} \\ & = 56cu \end{aligned}$$

$$\begin{aligned} 4. & -1 \cdot (-6xz) \cdot \left(-\frac{xz}{-xz} \right) \\ & = 6xz \end{aligned}$$

$$\begin{aligned} 9. & \frac{32uv}{8v} \cdot (-5) \cdot u \\ & = -20u^2 \end{aligned}$$

$$\begin{aligned} 5. & 5z^2 \cdot \frac{cz^2}{-z} \cdot 7 \\ & = -35cz^3 \end{aligned}$$

$$\begin{aligned} 10. & ac \cdot a \cdot (-c) \cdot 4a \\ & = -4a^3c^2 \end{aligned}$$

Simplification d'Expressions (J)

Simplifiez chaque expression.

1. $5 \cdot x \cdot 4 \cdot 6x^2$

6. $-\frac{18y^2z^3}{6yz \cdot 3z} \cdot y^2$

2. $5 \cdot \left(-\frac{8a^2c^2}{ac}\right) \cdot (-ac)$

7. $u \cdot cu \cdot 7 \cdot (-10c)$

3. $u \cdot a \cdot 9au \cdot 10u$

8. $\frac{36c^2v}{4c} \cdot c \cdot (-6)$

4. $-\frac{cv}{-v} \cdot 7 \cdot c$

9. $-\frac{36uv^2}{9v} \cdot (-v^2) \cdot u$

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

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

Simplification d'Expressions (J) Solutions

Simplifiez chaque expression.

$$1. 5 \cdot x \cdot 4 \cdot 6x^2 \\ = 120x^3$$

$$6. -\frac{18y^2z^3}{6yz \cdot 3z} \cdot y^2 \\ = -y^3z$$

$$2. 5 \cdot \left(-\frac{8a^2c^2}{ac}\right) \cdot (-ac) \\ = 40a^2c^2$$

$$7. u \cdot cu \cdot 7 \cdot (-10c) \\ = -70c^2u^2$$

$$3. u \cdot a \cdot 9au \cdot 10u \\ = 90a^2u^3$$

$$8. \frac{36c^2v}{4c} \cdot c \cdot (-6) \\ = -54c^2v$$

$$4. -\frac{cv}{-v} \cdot 7 \cdot c \\ = 7c^2$$

$$9. -\frac{36uv^2}{9v} \cdot (-v^2) \cdot u \\ = 4u^2v^3$$

$$5. a^2 \cdot (-a^2) \cdot 8 \cdot 3a^2 \\ = -24a^6$$

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