

Simplification d'Expressions (A)

Simplifiez chaque expression.

1. $a + 1 + 1 - 9ax$

6. $2c + 5c^2 + c + c$

2. $bc + c^2 - 7b + 9b$

7. $\frac{u}{u} - \frac{5u^3}{5u}$

3. $2 \cdot b \cdot b^2 + x$

8. $8c \cdot \frac{c^2u}{-cu} + cu$

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

9. $-\frac{4b^2z}{b^2} + 1 + 5bz$

5. $-2bu \cdot 10u^2 - \frac{b^2u^2}{-b^2}$

10. $\frac{12z^2}{2z} + \frac{8u^2z^2}{8u^2}$

Simplification d'Expressions (A) Solutions

Simplifiez chaque expression.

$$1. \begin{aligned} a + 1 + 1 - 9ax \\ = -9ax + a + 2 \end{aligned}$$

$$6. \begin{aligned} 2c + 5c^2 + c + c \\ = 5c^2 + 4c \end{aligned}$$

$$2. \begin{aligned} bc + c^2 - 7b + 9b \\ = bc + c^2 + 2b \end{aligned}$$

$$7. \begin{aligned} \frac{u}{u} - \frac{5u^3}{5u} \\ = -u^2 + 1 \end{aligned}$$

$$3. \begin{aligned} 2 \cdot b \cdot b^2 + x \\ = 2b^3 + x \end{aligned}$$

$$8. \begin{aligned} 8c \cdot \frac{c^2u}{-cu} + cu \\ = -8c^2 + cu \end{aligned}$$

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

$$9. \begin{aligned} -\frac{4b^2z}{b^2} + 1 + 5bz \\ = 5bz - 4z + 1 \end{aligned}$$

$$5. \begin{aligned} -2bu \cdot 10u^2 - \frac{b^2u^2}{-b^2} \\ = -20bu^3 + u^2 \end{aligned}$$

$$10. \begin{aligned} \frac{12z^2}{2z} + \frac{8u^2z^2}{8u^2} \\ = z^2 + 6z \end{aligned}$$

Simplification d'Expressions (B)

Simplifiez chaque expression.

1. $7y + 4 - \frac{z}{-1}$

6. $1 - 2c^2 + 4 + c$

2. $y^2 - z + yz \cdot y$

7. $-1 \cdot \frac{4a^2b}{4a} \cdot 5b$

3. $-1 \cdot (-u) \cdot uz - 1$

8. $-\frac{32u}{-4u} + \frac{au}{-1}$

4. $10b^2 + b^2 + 10b - 6$

9. $\frac{x^2}{x} - \frac{3v}{v}$

5. $-by + \frac{24by}{-3by} - 7$

10. $6 + 5 + z + z$

Simplification d'Expressions (B) Solutions

Simplifiez chaque expression.

$$\begin{aligned} 1. \quad & 7y + 4 - \frac{z}{-1} \\ & = 7y + z + 4 \end{aligned}$$

$$\begin{aligned} 6. \quad & 1 - 2c^2 + 4 + c \\ & = -2c^2 + c + 5 \end{aligned}$$

$$\begin{aligned} 2. \quad & y^2 - z + yz \cdot y \\ & = y^2z + y^2 - z \end{aligned}$$

$$\begin{aligned} 7. \quad & -1 \cdot \frac{4a^2b}{4a} \cdot 5b \\ & = -5ab^2 \end{aligned}$$

$$\begin{aligned} 3. \quad & -1 \cdot (-u) \cdot uz - 1 \\ & = u^2z - 1 \end{aligned}$$

$$\begin{aligned} 8. \quad & -\frac{32u}{-4u} + \frac{au}{-1} \\ & = -au + 8 \end{aligned}$$

$$\begin{aligned} 4. \quad & 10b^2 + b^2 + 10b - 6 \\ & = 11b^2 + 10b - 6 \end{aligned}$$

$$\begin{aligned} 9. \quad & \frac{x^2}{x} - \frac{3v}{v} \\ & = x - 3 \end{aligned}$$

$$\begin{aligned} 5. \quad & -by + \frac{24by}{-3by} - 7 \\ & = -by - 15 \end{aligned}$$

$$\begin{aligned} 10. \quad & 6 + 5 + z + z \\ & = 2z + 11 \end{aligned}$$

Simplification d'Expressions (C)

Simplifiez chaque expression.

1. $2ac + ac - ac - 10a$

6. $y + x^2 - \frac{xy^2}{-y}$

2. $1 + 1 + v + 5v$

7. $7a^2 + a + a + 1$

3. $-2 + 5c \cdot c + 4cy$

8. $7z^2 \cdot 9z \cdot (-9cz) \cdot (-c)$

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

9. $-a^2 + y + 5y + ay$

5. $\frac{b^3c}{-bc} - 5b^2 + 6$

10. $-4v^2 - \frac{8vx}{-1} - x$

Simplification d'Expressions (C) Solutions

Simplifiez chaque expression.

$$1. \begin{aligned} 2ac + ac - ac - 10a \\ = 2ac - 10a \end{aligned}$$

$$6. \begin{aligned} y + x^2 - \frac{xy^2}{-y} \\ = x^2 + xy + y \end{aligned}$$

$$2. \begin{aligned} 1 + 1 + v + 5v \\ = 6v + 2 \end{aligned}$$

$$7. \begin{aligned} 7a^2 + a + a + 1 \\ = 7a^2 + 2a + 1 \end{aligned}$$

$$3. \begin{aligned} -2 + 5c \cdot c + 4cy \\ = 5c^2 + 4cy - 2 \end{aligned}$$

$$8. \begin{aligned} 7z^2 \cdot 9z \cdot (-9cz) \cdot (-c) \\ = 567c^2z^4 \end{aligned}$$

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

$$9. \begin{aligned} -a^2 + y + 5y + ay \\ = -a^2 + ay + 6y \end{aligned}$$

$$5. \begin{aligned} \frac{b^3c}{-bc} - 5b^2 + 6 \\ = -6b^2 + 6 \end{aligned}$$

$$10. \begin{aligned} -4v^2 - \frac{8vx}{-1} - x \\ = -4v^2 + 8vx - x \end{aligned}$$

Simplification d'Expressions (D)

Simplifiez chaque expression.

1. $x - x^2 - 3 + x$

6. $-y + y^2 - c + y$

2. $-\frac{280a^3}{10a \cdot 4a} - 4$

7. $8c + \frac{18z^2}{-6z} + c^2$

3. $-\frac{v}{-1} - 10b^2 - 1$

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

4. $-\frac{32a^4u^2}{8a \cdot au \cdot (-a)}$

9. $-\frac{5c^4}{5c^2} + 4 \cdot 6$

5. $cv \cdot \frac{8v}{2} + 7cv$

10. $\frac{c^2}{c^2} - 6a - a$

Simplification d'Expressions (D) Solutions

Simplifiez chaque expression.

$$\begin{aligned} 1. \quad & x - x^2 - 3 + x \\ & = -x^2 + 2x - 3 \end{aligned}$$

$$\begin{aligned} 6. \quad & -y + y^2 - c + y \\ & = y^2 - c \end{aligned}$$

$$\begin{aligned} 2. \quad & -\frac{280a^3}{10a \cdot 4a} - 4 \\ & = -7a - 4 \end{aligned}$$

$$\begin{aligned} 7. \quad & 8c + \frac{18z^2}{-6z} + c^2 \\ & = c^2 + 8c - 3z \end{aligned}$$

$$\begin{aligned} 3. \quad & -\frac{v}{-1} - 10b^2 - 1 \\ & = -10b^2 + v - 1 \end{aligned}$$

$$\begin{aligned} 8. \quad & x \cdot 9 - \frac{x^4}{-x^2} \\ & = x^2 + 9x \end{aligned}$$

$$\begin{aligned} 4. \quad & -\frac{32a^4u^2}{8a \cdot au \cdot (-a)} \\ & = 4au \end{aligned}$$

$$\begin{aligned} 9. \quad & -\frac{5c^4}{5c^2} + 4 \cdot 6 \\ & = -c^2 + 24 \end{aligned}$$

$$\begin{aligned} 5. \quad & cv \cdot \frac{8v}{2} + 7cv \\ & = 4cv^2 + 7cv \end{aligned}$$

$$\begin{aligned} 10. \quad & \frac{c^2}{c^2} - 6a - a \\ & = -7a + 1 \end{aligned}$$

Simplification d'Expressions (E)

Simplifiez chaque expression.

1. $1 + \frac{a^2y}{a} - y^2$

6. $b + b - bv + bv$

2. $-1 \cdot 3v + 9v^2 - 2v$

7. $-y - 9 \cdot (-3y) \cdot 7$

3. $a \cdot 7a + a^2 + 3a$

8. $-u^2 + 10u^2 + 5u + 8u^2$

4. $8a - u - 3au + 10au$

9. $\frac{90z^2}{10z} + \frac{z}{z}$

5. $9 - \frac{80av^2}{10av} + av$

10. $-2 + 10 + 4a + v$

Simplification d'Expressions (E) Solutions

Simplifiez chaque expression.

$$\begin{aligned} 1. \quad & 1 + \frac{a^2y}{a} - y^2 \\ & = ay - y^2 + 1 \end{aligned}$$

$$\begin{aligned} 6. \quad & b + b - bv + bv \\ & = 2b \end{aligned}$$

$$\begin{aligned} 2. \quad & -1 \cdot 3v + 9v^2 - 2v \\ & = 9v^2 - 5v \end{aligned}$$

$$\begin{aligned} 7. \quad & -y - 9 \cdot (-3y) \cdot 7 \\ & = 188y \end{aligned}$$

$$\begin{aligned} 3. \quad & a \cdot 7a + a^2 + 3a \\ & = 8a^2 + 3a \end{aligned}$$

$$\begin{aligned} 8. \quad & -u^2 + 10u^2 + 5u + 8u^2 \\ & = 17u^2 + 5u \end{aligned}$$

$$\begin{aligned} 4. \quad & 8a - u - 3au + 10au \\ & = 7au + 8a - u \end{aligned}$$

$$\begin{aligned} 9. \quad & \frac{90z^2}{10z} + \frac{z}{z} \\ & = 9z + 1 \end{aligned}$$

$$\begin{aligned} 5. \quad & 9 - \frac{80av^2}{10av} + av \\ & = av - 8v + 9 \end{aligned}$$

$$\begin{aligned} 10. \quad & -2 + 10 + 4a + v \\ & = 4a + v + 8 \end{aligned}$$

Simplification d'Expressions (F)

Simplifiez chaque expression.

1. $-\frac{20z^2}{5} + \frac{40z^3}{8z^2}$

6. $-1 - 9b \cdot 7bx - 1$

2. $10c \cdot c \cdot 3ac \cdot 2c$

7. $\frac{60ay^2}{10y^2 \cdot (-6a)} + a$

3. $-3 - \frac{18y}{3} + 3$

8. $z + cz \cdot cz \cdot 9$

4. $cu \cdot \left(-\frac{28c^2u^2}{c \cdot (-4u)} \right)$

9. $-\frac{6y}{-6y} + \frac{b^2y^2}{y^2}$

5. $-z - 2 + \frac{8z^2}{8z^2}$

10. $-1 + 4v^2 + 6 + vz$

Simplification d'Expressions (F) Solutions

Simplifiez chaque expression.

$$\begin{aligned} 1. & -\frac{20z^2}{5} + \frac{40z^3}{8z^2} \\ & = -4z^2 + 5z \end{aligned}$$

$$\begin{aligned} 6. & -1 - 9b \cdot 7bx - 1 \\ & = -63b^2x - 2 \end{aligned}$$

$$\begin{aligned} 2. & 10c \cdot c \cdot 3ac \cdot 2c \\ & = 60ac^4 \end{aligned}$$

$$\begin{aligned} 7. & \frac{60ay^2}{10y^2 \cdot (-6a)} + a \\ & = a - 1 \end{aligned}$$

$$\begin{aligned} 3. & -3 - \frac{18y}{3} + 3 \\ & = -6y \end{aligned}$$

$$\begin{aligned} 8. & z + cz \cdot cz \cdot 9 \\ & = 9c^2z^2 + z \end{aligned}$$

$$\begin{aligned} 4. & cu \cdot \left(-\frac{28c^2u^2}{c \cdot (-4u)} \right) \\ & = 7c^2u^2 \end{aligned}$$

$$\begin{aligned} 9. & -\frac{6y}{-6y} + \frac{b^2y^2}{y^2} \\ & = b^2 + 1 \end{aligned}$$

$$\begin{aligned} 5. & -z - 2 + \frac{8z^2}{8z^2} \\ & = -z - 1 \end{aligned}$$

$$\begin{aligned} 10. & -1 + 4v^2 + 6 + vz \\ & = 4v^2 + vz + 5 \end{aligned}$$

Simplification d'Expressions (G)

Simplifiez chaque expression.

1. $10 + 7 + x - 2xy$

6. $-4x^2 + 6x + x - 10x^2$

2. $-\frac{36}{-9} - x \cdot 9x^2$

7. $-1 \cdot (-c^2) + z + 9cz$

3. $-b + 4b + b + 8$

8. $y^2 \cdot (-1) \cdot (-4ay) \cdot ay$

4. $-\frac{a^6}{a^2 \cdot a^2} \cdot (-2ax)$

9. $-\frac{u}{-u} + \frac{9uy^2}{9y^2}$

5. $1 + \frac{40c^2y^2}{5cy} + y$

10. $10a + 1 - \frac{4a^2z}{-a}$

Simplification d'Expressions (G) Solutions

Simplifiez chaque expression.

$$\begin{aligned} 1. & 10 + 7 + x - 2xy \\ &= -2xy + x + 17 \end{aligned}$$

$$\begin{aligned} 6. & -4x^2 + 6x + x - 10x^2 \\ &= -14x^2 + 7x \end{aligned}$$

$$\begin{aligned} 2. & -\frac{36}{-9} - x \cdot 9x^2 \\ &= -9x^3 + 4 \end{aligned}$$

$$\begin{aligned} 7. & -1 \cdot (-c^2) + z + 9cz \\ &= c^2 + 9cz + z \end{aligned}$$

$$\begin{aligned} 3. & -b + 4b + b + 8 \\ &= 4b + 8 \end{aligned}$$

$$\begin{aligned} 8. & y^2 \cdot (-1) \cdot (-4ay) \cdot ay \\ &= 4a^2y^4 \end{aligned}$$

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

$$\begin{aligned} 9. & -\frac{u}{-u} + \frac{9uy^2}{9y^2} \\ &= u + 1 \end{aligned}$$

$$\begin{aligned} 5. & 1 + \frac{40c^2y^2}{5cy} + y \\ &= 8cy + y + 1 \end{aligned}$$

$$\begin{aligned} 10. & 10a + 1 - \frac{4a^2z}{-a} \\ &= 4az + 10a + 1 \end{aligned}$$

Simplification d'Expressions (H)

Simplifiez chaque expression.

1. $\frac{21y^3}{7y} + \frac{yz}{yz}$

6. $5u + u^2 - u - 8$

2. $a^2 + 1 + ab + 10$

7. $av \cdot (-10) + \frac{5a}{5a}$

3. $1 + \frac{8bu^2}{u^2} + u^2$

8. $3b - 8b^2 + 8b - b$

4. $10c + c + c + c^2$

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

5. $\frac{8v^4}{8v^2} + 1 + v^2$

10. $-4y \cdot 4y^2 + \frac{3y^2}{y}$

Simplification d'Expressions (H) Solutions

Simplifiez chaque expression.

$$\begin{aligned} 1. \quad & \frac{21y^3}{7y} + \frac{yz}{yz} \\ & = 3y^2 + 1 \end{aligned}$$

$$\begin{aligned} 6. \quad & 5u + u^2 - u - 8 \\ & = u^2 + 4u - 8 \end{aligned}$$

$$\begin{aligned} 2. \quad & a^2 + 1 + ab + 10 \\ & = a^2 + ab + 11 \end{aligned}$$

$$\begin{aligned} 7. \quad & av \cdot (-10) + \frac{5a}{5a} \\ & = -10av + 1 \end{aligned}$$

$$\begin{aligned} 3. \quad & 1 + \frac{8bu^2}{u^2} + u^2 \\ & = u^2 + 8b + 1 \end{aligned}$$

$$\begin{aligned} 8. \quad & 3b - 8b^2 + 8b - b \\ & = -8b^2 + 10b \end{aligned}$$

$$\begin{aligned} 4. \quad & 10c + c + c + c^2 \\ & = c^2 + 12c \end{aligned}$$

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

$$\begin{aligned} 5. \quad & \frac{8v^4}{8v^2} + 1 + v^2 \\ & = 2v^2 + 1 \end{aligned}$$

$$\begin{aligned} 10. \quad & -4y \cdot 4y^2 + \frac{3y^2}{y} \\ & = -16y^3 + 3y \end{aligned}$$

Simplification d'Expressions (I)

Simplifiez chaque expression.

1. $-3uy + u + \frac{y^2}{y}$

6. $7 + x + y + 7$

2. $1 - u - u^2 - 7$

7. $\frac{2x^2}{2x^2} - 4u + 1$

3. $x^2 - 1 + 8 + a$

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

4. $-\frac{2by^2}{-y} + 7y + 9b$

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

5. $-6u + \frac{36u^6}{6u^2 \cdot u^2}$

10. $b + 3b^2 - 1 \cdot (-1)$

Simplification d'Expressions (I) Solutions

Simplifiez chaque expression.

$$\begin{aligned} 1. \quad & -3uy + u + \frac{y^2}{y} \\ & = -3uy + u + y \end{aligned}$$

$$\begin{aligned} 6. \quad & 7 + x + y + 7 \\ & = x + y + 14 \end{aligned}$$

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

$$\begin{aligned} 7. \quad & \frac{2x^2}{2x^2} - 4u + 1 \\ & = -4u + 2 \end{aligned}$$

$$\begin{aligned} 3. \quad & x^2 - 1 + 8 + a \\ & = x^2 + a + 7 \end{aligned}$$

$$\begin{aligned} 8. \quad & \frac{7a^2u^2}{7u^2 \cdot a} \cdot 9 \\ & = 9a \end{aligned}$$

$$\begin{aligned} 4. \quad & -\frac{2by^2}{-y} + 7y + 9b \\ & = 2by + 7y + 9b \end{aligned}$$

$$\begin{aligned} 9. \quad & -vy \cdot (-y) \cdot vy - y^2 \\ & = v^2y^3 - y^2 \end{aligned}$$

$$\begin{aligned} 5. \quad & -6u + \frac{36u^6}{6u^2 \cdot u^2} \\ & = 6u^2 - 6u \end{aligned}$$

$$\begin{aligned} 10. \quad & b + 3b^2 - 1 \cdot (-1) \\ & = 3b^2 + b + 1 \end{aligned}$$

Simplification d'Expressions (J)

Simplifiez chaque expression.

1. $-x \cdot x^2 - x + x$

6. $-c - \frac{7ac}{7ac} - 4ac$

2. $8ab + 8 - ab \cdot (-1)$

7. $u - cu - \frac{u}{-u}$

3. $4cy + 10y + 9 - 1$

8. $-\frac{7az}{7az} + 5 \cdot (-7a)$

4. $-\frac{7u^3}{-7u} + \frac{u^2}{u^2}$

9. $-x + \frac{3u}{3} - 1$

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

10. $-\frac{9au}{-9} - 3u^2 \cdot (-5au)$

Simplification d'Expressions (J) Solutions

Simplifiez chaque expression.

$$\begin{aligned} 1. & -x \cdot x^2 - x + x \\ & = -x^3 \end{aligned}$$

$$\begin{aligned} 6. & -c - \frac{7ac}{7ac} - 4ac \\ & = -4ac - c - 1 \end{aligned}$$

$$\begin{aligned} 2. & 8ab + 8 - ab \cdot (-1) \\ & = 9ab + 8 \end{aligned}$$

$$\begin{aligned} 7. & u - cu - \frac{u}{-u} \\ & = -cu + u + 1 \end{aligned}$$

$$\begin{aligned} 3. & 4cy + 10y + 9 - 1 \\ & = 4cy + 10y + 8 \end{aligned}$$

$$\begin{aligned} 8. & -\frac{7az}{7az} + 5 \cdot (-7a) \\ & = -35a - 1 \end{aligned}$$

$$\begin{aligned} 4. & -\frac{7u^3}{-7u} + \frac{u^2}{u^2} \\ & = u^2 + 1 \end{aligned}$$

$$\begin{aligned} 9. & -x + \frac{3u}{3} - 1 \\ & = -x + u - 1 \end{aligned}$$

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

$$\begin{aligned} 10. & -\frac{9au}{-9} - 3u^2 \cdot (-5au) \\ & = 15au^3 + au \end{aligned}$$