

## Simplifying Expressions (A)

Simplify each expression.

1.  $u^2 + 1 + u - 1$

6.  $c + 4 + 6c + 1$

2.  $-b + b^2 - 1 + b^2$

7.  $5 + c + 1 - 1$

3.  $6 + z + z^2 + z$

8.  $-5 + 6u^2 + 3 + u$

4.  $u^2 + 6 + u + 6u$

9.  $2u + 3u - 6u - 5u^2$

5.  $u - 6u - 4u + u^2$

10.  $-4b - b + 3b^2 + b$

## Simplifying Expressions (A) Answers

Simplify each expression.

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

$$\begin{aligned} 6. \quad & c + 4 + 6c + 1 \\ & = 7c + 5 \end{aligned}$$

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

$$\begin{aligned} 7. \quad & 5 + c + 1 - 1 \\ & = c + 5 \end{aligned}$$

$$\begin{aligned} 3. \quad & 6 + z + z^2 + z \\ & = z^2 + 2z + 6 \end{aligned}$$

$$\begin{aligned} 8. \quad & -5 + 6u^2 + 3 + u \\ & = 6u^2 + u - 2 \end{aligned}$$

$$\begin{aligned} 4. \quad & u^2 + 6 + u + 6u \\ & = u^2 + 7u + 6 \end{aligned}$$

$$\begin{aligned} 9. \quad & 2u + 3u - 6u - 5u^2 \\ & = -5u^2 - u \end{aligned}$$

$$\begin{aligned} 5. \quad & u - 6u - 4u + u^2 \\ & = u^2 - 9u \end{aligned}$$

$$\begin{aligned} 10. \quad & -4b - b + 3b^2 + b \\ & = 3b^2 - 4b \end{aligned}$$

## Simplifying Expressions (B)

Simplify each expression.

1.  $1 - 5a^2 + 2a + 4a$

6.  $u + 3u - 4u^2 - u$

2.  $v^2 - v^2 + v + 6v$

7.  $y^2 + 1 + 2y^2 + 5$

3.  $y + 6y^2 - 2y - 4y$

8.  $1 - 5a^2 + 5a + 2a^2$

4.  $-4u^2 - u + u^2 + 2u^2$

9.  $6b + 1 - b^2 - 1$

5.  $5c^2 + c - 4c^2 - c$

10.  $v^2 + v^2 + v^2 + v$

## Simplifying Expressions (B) Answers

Simplify each expression.

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

$$\begin{aligned} 6. \quad & u + 3u - 4u^2 - u \\ & = -4u^2 + 3u \end{aligned}$$

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

$$\begin{aligned} 7. \quad & y^2 + 1 + 2y^2 + 5 \\ & = 3y^2 + 6 \end{aligned}$$

$$\begin{aligned} 3. \quad & y + 6y^2 - 2y - 4y \\ & = 6y^2 - 5y \end{aligned}$$

$$\begin{aligned} 8. \quad & 1 - 5a^2 + 5a + 2a^2 \\ & = -3a^2 + 5a + 1 \end{aligned}$$

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

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

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

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

## Simplifying Expressions (C)

Simplify each expression.

1.  $-5x - 1 + x + x$

6.  $3c^2 - c^2 - c^2 + c$

2.  $-6y^2 + 5y^2 + y^2 - y$

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

3.  $4 - 6x + x + 1$

8.  $5 - 1 - 4b^2 + 1$

4.  $3 + 6 + 5a^2 + a$

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

5.  $u^2 + 3u + 4 - u$

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

## Simplifying Expressions (C) Answers

Simplify each expression.

$$\begin{aligned} 1. & -5x - 1 + x + x \\ & = -3x - 1 \end{aligned}$$

$$\begin{aligned} 6. & 3c^2 - c^2 - c^2 + c \\ & = c^2 + c \end{aligned}$$

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

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

$$\begin{aligned} 3. & 4 - 6x + x + 1 \\ & = -5x + 5 \end{aligned}$$

$$\begin{aligned} 8. & 5 - 1 - 4b^2 + 1 \\ & = -4b^2 + 5 \end{aligned}$$

$$\begin{aligned} 4. & 3 + 6 + 5a^2 + a \\ & = 5a^2 + a + 9 \end{aligned}$$

$$\begin{aligned} 9. & c^2 + 6c^2 + 6c^2 - c \\ & = 13c^2 - c \end{aligned}$$

$$\begin{aligned} 5. & u^2 + 3u + 4 - u \\ & = u^2 + 2u + 4 \end{aligned}$$

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

## Simplifying Expressions (D)

Simplify each expression.

1.  $1 + b + b^2 + 3$

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

2.  $-5b^2 + 2b - 2 + b^2$

7.  $v - 4v^2 - 2v - v^2$

3.  $5z + 5z + z^2 + 3z^2$

8.  $v^2 + 2v^2 + 5 + 1$

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

9.  $6b^2 - b^2 - 1 + 2$

5.  $2y - y^2 + y + y^2$

10.  $5v^2 + 4v + 3v + v^2$

## Simplifying Expressions (D) Answers

Simplify each expression.

$$\begin{aligned} 1. \quad & 1 + b + b^2 + 3 \\ & = b^2 + b + 4 \end{aligned}$$

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

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

$$\begin{aligned} 7. \quad & v - 4v^2 - 2v - v^2 \\ & = -5v^2 - v \end{aligned}$$

$$\begin{aligned} 3. \quad & 5z + 5z + z^2 + 3z^2 \\ & = 4z^2 + 10z \end{aligned}$$

$$\begin{aligned} 8. \quad & v^2 + 2v^2 + 5 + 1 \\ & = 3v^2 + 6 \end{aligned}$$

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

$$\begin{aligned} 9. \quad & 6b^2 - b^2 - 1 + 2 \\ & = 5b^2 + 1 \end{aligned}$$

$$\begin{aligned} 5. \quad & 2y - y^2 + y + y^2 \\ & = 3y \end{aligned}$$

$$\begin{aligned} 10. \quad & 5v^2 + 4v + 3v + v^2 \\ & = 6v^2 + 7v \end{aligned}$$



## Simplifying Expressions (E)

Simplify each expression.

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

6.  $-6v + 1 + v - 1$

2.  $3x^2 + x^2 + 5x + 5x^2$

7.  $c^2 + c^2 - 5 - c$

3.  $1 - 3a - 5a + 1$

8.  $3u^2 - 5 + u + u^2$

4.  $-v + 6v + v + 1$

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

5.  $1 - 1 + v + 1$

10.  $-2 + 4y + y - y$

## Simplifying Expressions (E) Answers

Simplify each expression.

$$\begin{aligned} 1. \quad & 4c + c^2 + c^2 + c^2 \\ & = 3c^2 + 4c \end{aligned}$$

$$\begin{aligned} 6. \quad & -6v + 1 + v - 1 \\ & = -5v \end{aligned}$$

$$\begin{aligned} 2. \quad & 3x^2 + x^2 + 5x + 5x^2 \\ & = 9x^2 + 5x \end{aligned}$$

$$\begin{aligned} 7. \quad & c^2 + c^2 - 5 - c \\ & = 2c^2 - c - 5 \end{aligned}$$

$$\begin{aligned} 3. \quad & 1 - 3a - 5a + 1 \\ & = -8a + 2 \end{aligned}$$

$$\begin{aligned} 8. \quad & 3u^2 - 5 + u + u^2 \\ & = 4u^2 + u - 5 \end{aligned}$$

$$\begin{aligned} 4. \quad & -v + 6v + v + 1 \\ & = 6v + 1 \end{aligned}$$

$$\begin{aligned} 9. \quad & x + x + 1 - x^2 \\ & = -x^2 + 2x + 1 \end{aligned}$$

$$\begin{aligned} 5. \quad & 1 - 1 + v + 1 \\ & = v + 1 \end{aligned}$$

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

## Simplifying Expressions (F)

Simplify each expression.

1.  $-v^2 - 4v + v + 4v^2$

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

2.  $2b + b + 6 + b$

7.  $2z + 1 - z - 4z^2$

3.  $4 + b - 3b - 5b$

8.  $x + 1 + 1 - 1$

4.  $2 + 3a - 1 + 1$

9.  $1 + c - 6c - 1$

5.  $y^2 + 6y^2 - 1 + 4y^2$

10.  $2y + 2 + y^2 - y^2$

## Simplifying Expressions (F) Answers

Simplify each expression.

$$\begin{aligned} 1. \quad & -v^2 - 4v + v + 4v^2 \\ & = 3v^2 - 3v \end{aligned}$$

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

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

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

$$\begin{aligned} 3. \quad & 4 + b - 3b - 5b \\ & = -7b + 4 \end{aligned}$$

$$\begin{aligned} 8. \quad & x + 1 + 1 - 1 \\ & = x + 1 \end{aligned}$$

$$\begin{aligned} 4. \quad & 2 + 3a - 1 + 1 \\ & = 3a + 2 \end{aligned}$$

$$\begin{aligned} 9. \quad & 1 + c - 6c - 1 \\ & = -5c \end{aligned}$$

$$\begin{aligned} 5. \quad & y^2 + 6y^2 - 1 + 4y^2 \\ & = 11y^2 - 1 \end{aligned}$$

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

## Simplifying Expressions (G)

Simplify each expression.

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

6.  $z^2 - z - 2z^2 + z$

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

7.  $-u^2 + 3u^2 + u^2 + u^2$

3.  $5z^2 - z - 3 + 4$

8.  $1 - y + 1 - 1$

4.  $-u + u + u + u^2$

9.  $1 + x^2 - x - 1$

5.  $-v^2 - 6 + 3v^2 - 6v^2$

10.  $2a + a + a + 5$

## Simplifying Expressions (G) Answers

Simplify each expression.

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

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

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

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

$$\begin{aligned} 3. \quad & 5z^2 - z - 3 + 4 \\ & = 5z^2 - z + 1 \end{aligned}$$

$$\begin{aligned} 8. \quad & 1 - y + 1 - 1 \\ & = -y + 1 \end{aligned}$$

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

$$\begin{aligned} 9. \quad & 1 + x^2 - x - 1 \\ & = x^2 - x \end{aligned}$$

$$\begin{aligned} 5. \quad & -v^2 - 6 + 3v^2 - 6v^2 \\ & = -4v^2 - 6 \end{aligned}$$

$$\begin{aligned} 10. \quad & 2a + a + a + 5 \\ & = 4a + 5 \end{aligned}$$

## Simplifying Expressions (H)

Simplify each expression.

1.  $1 + 1 - y^2 + y$

6.  $z - 2 + 1 + 5z$

2.  $5x^2 + 1 + x - 3x$

7.  $3b^2 + 1 + 5b^2 - b^2$

3.  $1 - z + 4z^2 + 2z^2$

8.  $-z + 1 + z^2 + 1$

4.  $1 - b^2 - 1 + 5b^2$

9.  $a + 6a^2 + 1 + a^2$

5.  $x^2 + x + 4x^2 + 1$

10.  $a^2 - 3 + a - a$

## Simplifying Expressions (H) Answers

Simplify each expression.

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

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

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

$$\begin{aligned} 7. \quad & 3b^2 + 1 + 5b^2 - b^2 \\ & = 7b^2 + 1 \end{aligned}$$

$$\begin{aligned} 3. \quad & 1 - z + 4z^2 + 2z^2 \\ & = 6z^2 - z + 1 \end{aligned}$$

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

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

$$\begin{aligned} 9. \quad & a + 6a^2 + 1 + a^2 \\ & = 7a^2 + a + 1 \end{aligned}$$

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

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



## Simplifying Expressions (I)

Simplify each expression.

1.  $-x^2 + 2 - 3x^2 + 4$

6.  $-6u^2 - u - 3u^2 - 4u^2$

2.  $6c + 3c - c^2 + c^2$

7.  $4 - 3 + 2 - 5u^2$

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

8.  $v^2 + v^2 - 1 + 1$

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

9.  $y^2 + 1 + 1 + y^2$

5.  $v^2 + v - 3v^2 + v^2$

10.  $2c^2 - 2c - 1 - c^2$

## Simplifying Expressions (I) Answers

Simplify each expression.

$$\begin{aligned} 1. & -x^2 + 2 - 3x^2 + 4 \\ & = -4x^2 + 6 \end{aligned}$$

$$\begin{aligned} 6. & -6u^2 - u - 3u^2 - 4u^2 \\ & = -13u^2 - u \end{aligned}$$

$$\begin{aligned} 2. & 6c + 3c - c^2 + c^2 \\ & = 9c \end{aligned}$$

$$\begin{aligned} 7. & 4 - 3 + 2 - 5u^2 \\ & = -5u^2 + 3 \end{aligned}$$

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

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

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

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

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

$$\begin{aligned} 10. & 2c^2 - 2c - 1 - c^2 \\ & = c^2 - 2c - 1 \end{aligned}$$

## Simplifying Expressions (J)

Simplify each expression.

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

6.  $1 - 6x + x + 5x^2$

2.  $5v^2 - 1 + 2v + v$

7.  $4b^2 + 1 - b - 1$

3.  $2v^2 + 1 + 4v + v$

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

4.  $4z^2 + z^2 + 6z^2 + 5$

9.  $-z^2 + z^2 - 5z + z$

5.  $c^2 + c - c - c$

10.  $3 + 5z - z - 4z^2$

## Simplifying Expressions (J) Answers

Simplify each expression.

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

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

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

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

$$\begin{aligned} 3. & 2v^2 + 1 + 4v + v \\ & = 2v^2 + 5v + 1 \end{aligned}$$

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

$$\begin{aligned} 4. & 4z^2 + z^2 + 6z^2 + 5 \\ & = 11z^2 + 5 \end{aligned}$$

$$\begin{aligned} 9. & -z^2 + z^2 - 5z + z \\ & = -4z \end{aligned}$$

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

$$\begin{aligned} 10. & 3 + 5z - z - 4z^2 \\ & = -4z^2 + 4z + 3 \end{aligned}$$