

Simplifying Expressions (A)

Simplify each expression.

1. $61u + 1 - 1 - 1 - y + \frac{ay^3}{ay} + 28$

2. $-91z - z - 43 + 91z - 1 + 1 + 1 - 50$

3. $bv + bv + 1 + 63 - 26 + 86b^2 + 67v - vz$

4. $\frac{576acvx}{18cv} + 73x \cdot x - 83 - a \cdot (-94c) \cdot av$

5. $92v^2 + 1 + v - 1 + vz + \frac{2v^3}{2v} + 1$

Simplifying Expressions (A) Answers

Simplify each expression.

$$\begin{aligned} 1. \quad & 61u + 1 - 1 - 1 - y + \frac{ay^3}{ay} + 28 \\ & = y^2 + 61u - y + 27 \end{aligned}$$

$$\begin{aligned} 2. \quad & -91z - z - 43 + 91z - 1 + 1 + 1 - 50 \\ & = -z - 92 \end{aligned}$$

$$\begin{aligned} 3. \quad & bv + bv + 1 + 63 - 26 + 86b^2 + 67v - vz \\ & = 2bv + 86b^2 - vz + 67v + 38 \end{aligned}$$

$$\begin{aligned} 4. \quad & \frac{576acvx}{18cv} + 73x \cdot x - 83 - a \cdot (-94c) \cdot av \\ & = 94a^2cv + 32ax + 73x^2 - 83 \end{aligned}$$

$$\begin{aligned} 5. \quad & 92v^2 + 1 + v - 1 + vz + \frac{2v^3}{2v} + 1 \\ & = 93v^2 + vz + v + 1 \end{aligned}$$

Simplifying Expressions (B)

Simplify each expression.

1. $-73xy + 40 - cv - x - x^2 + 1 - 85x - x$

2. $94z - 81b^2 - \frac{z}{-1} - 1 - 38bu + 1 - 47bz$

3. $12y + 64y^2 + ay - y + a + 6 + y^2 + 79ay$

4. $20ux \cdot 17y^2 + y + \frac{5y^3}{y^2} + 99 - \frac{8500u}{100}$

5. $c - 65 - \frac{57c^2x}{cx} + x^2 - 59c \cdot \left(-\frac{c}{c}\right)$

Simplifying Expressions (B) Answers

Simplify each expression.

$$\begin{aligned} 1. & -73xy + 40 - cv - x - x^2 + 1 - 85x - x \\ & = -73xy - cv - x^2 - 87x + 41 \end{aligned}$$

$$\begin{aligned} 2. & 94z - 81b^2 - \frac{z}{-1} - 1 - 38bu + 1 - 47bz \\ & = -81b^2 - 38bu - 47bz + 95z \end{aligned}$$

$$\begin{aligned} 3. & 12y + 64y^2 + ay - y + a + 6 + y^2 + 79ay \\ & = 65y^2 + 80ay + 11y + a + 6 \end{aligned}$$

$$\begin{aligned} 4. & 20ux \cdot 17y^2 + y + \frac{5y^3}{y^2} + 99 - \frac{8500u}{100} \\ & = 340uxy^2 + 6y - 85u + 99 \end{aligned}$$

$$\begin{aligned} 5. & c - 65 - \frac{57c^2x}{cx} + x^2 - 59c \cdot \left(-\frac{c}{c}\right) \\ & = x^2 + 3c - 65 \end{aligned}$$

Simplifying Expressions (C)

Simplify each expression.

1. $-vy \cdot 87 \cdot 89 \cdot 89 + \frac{a}{a} \cdot 77z - yz$

2. $a^2 \cdot (-u^2) \cdot (-36) \cdot u \cdot 81a \cdot 46 \cdot 11u^2 \cdot a$

3. $\frac{12ux}{12 \cdot ux} + \frac{21}{-21} - \frac{2244x^2}{68} + 70x$

4. $-85b - 16b^2 - b + 74xz - 1 - 56b - \frac{xz}{-1}$

5. $40vy \cdot yz \cdot yz \cdot yz - 95 + \frac{3744}{96 \cdot 39}$

Simplifying Expressions (C) Answers

Simplify each expression.

$$\begin{aligned} 1. & -vy \cdot 87 \cdot 89 \cdot 89 + \frac{a}{a} \cdot 77z - yz \\ & = -689127vy - yz + 77z \end{aligned}$$

$$\begin{aligned} 2. & a^2 \cdot (-u^2) \cdot (-36) \cdot u \cdot 81a \cdot 46 \cdot 11u^2 \cdot a \\ & = 1475496a^4u^5 \end{aligned}$$

$$\begin{aligned} 3. & \frac{12ux}{12 \cdot ux} + \frac{21}{-21} - \frac{2244x^2}{68} + 70x \\ & = -33x^2 + 70x \end{aligned}$$

$$\begin{aligned} 4. & -85b - 16b^2 - b + 74xz - 1 - 56b - \frac{xz}{-1} \\ & = -16b^2 + 75xz - 142b - 1 \end{aligned}$$

$$\begin{aligned} 5. & 40vy \cdot yz \cdot yz \cdot yz - 95 + \frac{3744}{96 \cdot 39} \\ & = 40vy^4z^3 - 94 \end{aligned}$$

Simplifying Expressions (D)

Simplify each expression.

1. $a + 1 + c - 45az + 71u^2 + 62 - 77ac - u^2$

2. $35au + 55av - 86uv + 1 + 54 + 51a^2 + 58 - 1$

3. $\frac{54u}{54u} + 48b + b - c + \frac{86u^3}{u} - b$

4. $\frac{64c^3}{-c} + 51 - cv \cdot 12v^2 + c + z + c^2$

5. $1 - \frac{y}{-1} - 44 + 1 - cu - 1 - 53c$

Simplifying Expressions (D) Answers

Simplify each expression.

$$\begin{aligned} 1. & a + 1 + c - 45az + 71u^2 + 62 - 77ac - u^2 \\ & = -45az + 70u^2 - 77ac + a + c + 63 \end{aligned}$$

$$\begin{aligned} 2. & 35au + 55av - 86uv + 1 + 54 + 51a^2 + 58 - 1 \\ & = 35au + 55av - 86uv + 51a^2 + 112 \end{aligned}$$

$$\begin{aligned} 3. & \frac{54u}{54u} + 48b + b - c + \frac{86u^3}{u} - b \\ & = 86u^2 + 48b - c + 1 \end{aligned}$$

$$\begin{aligned} 4. & \frac{64c^3}{-c} + 51 - cv \cdot 12v^2 + c + z + c^2 \\ & = -12cv^3 - 63c^2 + c + z + 51 \end{aligned}$$

$$\begin{aligned} 5. & 1 - \frac{y}{-1} - 44 + 1 - cu - 1 - 53c \\ & = -cu + y - 53c - 43 \end{aligned}$$

Simplifying Expressions (E)

Simplify each expression.

1. $c^2 - 1 + 80y + 24y^2 + ux - 58 - 7 + 58ux$

2. $u \cdot b^2 \cdot \frac{ab^2z}{ab} \cdot (-10) \cdot 43u + \frac{3612uz^3}{86z^2}$

3. $x \cdot \frac{6478axy}{-82xy} + \frac{418xy}{xy \cdot 38} \cdot 37x \cdot xy$

4. $bx \cdot (-x) - \frac{31b}{-31} + b + 78bx - vx + 1$

5. $44z^2 - c \cdot v - 1 - vy - 100 + 53v - 66cy$

Simplifying Expressions (E) Answers

Simplify each expression.

$$\begin{aligned} 1. & c^2 - 1 + 80y + 24y^2 + ux - 58 - 7 + 58ux \\ & = c^2 + 24y^2 + 59ux + 80y - 66 \end{aligned}$$

$$\begin{aligned} 2. & u \cdot b^2 \cdot \frac{ab^2z}{ab} \cdot (-10) \cdot 43u + \frac{3612uz^3}{86z^2} \\ & = -430b^3u^2z + 42uz \end{aligned}$$

$$\begin{aligned} 3. & x \cdot \frac{6478axy}{-82xy} + \frac{418xy}{xy \cdot 38} \cdot 37x \cdot xy \\ & = 407x^2y - 79ax \end{aligned}$$

$$\begin{aligned} 4. & bx \cdot (-x) - \frac{31b}{-31} + b + 78bx - vx + 1 \\ & = -bx^2 + 78bx - vx + 2b + 1 \end{aligned}$$

$$\begin{aligned} 5. & 44z^2 - c \cdot v - 1 - vy - 100 + 53v - 66cy \\ & = 44z^2 - cv - vy - 66cy + 53v - 101 \end{aligned}$$

Simplifying Expressions (F)

Simplify each expression.

1. $83v - vy \cdot 67y^2 \cdot 95b \cdot 73 + \frac{69b^2y^2}{y \cdot 69y}$

2. $87by \cdot (-60) \cdot 16y^2 + b^2 + by + bu - 88bu - 98$

3. $-91bz + 70xz - 26 - 98 + bx + b - 1 - 64z$

4. $-\frac{5478x^2y}{-y \cdot 83} + \frac{912xy^2}{12y^2} - \frac{46x^2y}{xy \cdot (-x)}$

5. $87 + \frac{7425c}{99c} + v^2 - 74c + 1 - v + 1$

Simplifying Expressions (F) Answers

Simplify each expression.

$$\begin{aligned} 1. \quad & 83v - vy \cdot 67y^2 \cdot 95b \cdot 73 + \frac{69b^2y^2}{y \cdot 69y} \\ & = -464645bvy^3 + b^2 + 83v \end{aligned}$$

$$\begin{aligned} 2. \quad & 87by \cdot (-60) \cdot 16y^2 + b^2 + by + bu - 88bu - 98 \\ & = -83520by^3 + b^2 + by - 87bu - 98 \end{aligned}$$

$$\begin{aligned} 3. \quad & -91bz + 70xz - 26 - 98 + bx + b - 1 - 64z \\ & = -91bz + 70xz + bx + b - 64z - 125 \end{aligned}$$

$$\begin{aligned} 4. \quad & -\frac{5478x^2y}{-y \cdot 83} + \frac{912xy^2}{12y^2} - \frac{46x^2y}{xy \cdot (-x)} \\ & = 66x^2 + 76x + 46 \end{aligned}$$

$$\begin{aligned} 5. \quad & 87 + \frac{7425c}{99c} + v^2 - 74c + 1 - v + 1 \\ & = v^2 - 74c - v + 164 \end{aligned}$$

Simplifying Expressions (G)

Simplify each expression.

1. $27a + a + u - u + \frac{26z^2}{z^2} + u + z$

2. $59z + 1 + 1 + b + 84 + y^2 + 1 + bz$

3. $-68 + 56 - 34z + 87cy - \frac{6225c^2z}{83c} + 24c + 91z^2$

4. $-\frac{cz}{cz} + c + 25c - 55au \cdot 46a \cdot 59z - 79$

5. $-\frac{3060c^2}{60c^2} - \frac{1104cz}{23} + a + 83a - 1 - y$

Simplifying Expressions (G) Answers

Simplify each expression.

$$\begin{aligned} 1. \quad & 27a + a + u - u + \frac{26z^2}{z^2} + u + z \\ & = 28a + u + z + 26 \end{aligned}$$

$$\begin{aligned} 2. \quad & 59z + 1 + 1 + b + 84 + y^2 + 1 + bz \\ & = y^2 + bz + 59z + b + 87 \end{aligned}$$

$$\begin{aligned} 3. \quad & -68 + 56 - 34z + 87cy - \frac{6225c^2z}{83c} + 24c + 91z^2 \\ & = 87cy - 75cz + 91z^2 - 34z + 24c - 12 \end{aligned}$$

$$\begin{aligned} 4. \quad & -\frac{cz}{cz} + c + 25c - 55au \cdot 46a \cdot 59z - 79 \\ & = -149270a^2uz + 26c - 80 \end{aligned}$$

$$\begin{aligned} 5. \quad & -\frac{3060c^2}{60c^2} - \frac{1104cz}{23} + a + 83a - 1 - y \\ & = -48cz + 84a - y - 52 \end{aligned}$$

Simplifying Expressions (H)

Simplify each expression.

1. $31x^2 - 1 + \frac{80}{-8} - 88y^2 \cdot y \cdot y^2 + 30yz$

2. $39c + \frac{4136u}{88u} + \frac{42cvy}{42vy} + u^2 \cdot (-y) + 72y$

3. $-60v + 51x + 18x + x + x^2 - 23 - 77vx + 89ux$

4. $83ax - x + 25cx - 78ay - 1 + 51 - 92x + 18x$

5. $-\frac{5418b^3u}{-63bu} + b^2 \cdot \left(-\frac{65b^2}{b^2}\right) \cdot (-72u) + 54b \cdot 8b$

Simplifying Expressions (H) Answers

Simplify each expression.

$$\begin{aligned} 1. \quad & 31x^2 - 1 + \frac{80}{-8} - 88y^2 \cdot y \cdot y^2 + 30yz \\ & = -88y^5 + 31x^2 + 30yz - 11 \end{aligned}$$

$$\begin{aligned} 2. \quad & 39c + \frac{4136u}{88u} + \frac{42cvy}{42vy} + u^2 \cdot (-y) + 72y \\ & = -u^2y + 40c + 72y + 47 \end{aligned}$$

$$\begin{aligned} 3. \quad & -60v + 51x + 18x + x + x^2 - 23 - 77vx + 89ux \\ & = x^2 - 77vx + 89ux - 60v + 70x - 23 \end{aligned}$$

$$\begin{aligned} 4. \quad & 83ax - x + 25cx - 78ay - 1 + 51 - 92x + 18x \\ & = 83ax + 25cx - 78ay - 75x + 50 \end{aligned}$$

$$\begin{aligned} 5. \quad & -\frac{5418b^3u}{-63bu} + b^2 \cdot \left(-\frac{65b^2}{b^2}\right) \cdot (-72u) + 54b \cdot 8b \\ & = 4680b^2u + 518b^2 \end{aligned}$$

Simplifying Expressions (I)

Simplify each expression.

1. $bx \cdot 20y + 91y - \frac{x}{-1} + 48 + y + 44b$

2. $-\frac{56a}{28} + 82 \cdot (-82a) + a + 26a^2 + a \cdot a^2$

3. $83 + 69vx + a - 18au - 50 \cdot (-54a) - \frac{43au}{-1}$

4. $vy - 43y^2 - \frac{xy}{-x} - y - \frac{88x}{-88} \cdot (-y)$

5. $-\frac{35u}{u} - \frac{80bu}{-1} - \frac{627uz}{-33} + \frac{62}{62}$

Simplifying Expressions (I) Answers

Simplify each expression.

$$\begin{aligned} 1. \quad & bx \cdot 20y + 91y - \frac{x}{-1} + 48 + y + 44b \\ & = 20bxy + 92y + x + 44b + 48 \end{aligned}$$

$$\begin{aligned} 2. \quad & -\frac{56a}{28} + 82 \cdot (-82a) + a + 26a^2 + a \cdot a^2 \\ & = a^3 + 26a^2 - 6725a \end{aligned}$$

$$\begin{aligned} 3. \quad & 83 + 69vx + a - 18au - 50 \cdot (-54a) - \frac{43au}{-1} \\ & = 69vx + 25au + 2701a + 83 \end{aligned}$$

$$\begin{aligned} 4. \quad & vy - 43y^2 - \frac{xy}{-x} - y - \frac{88x}{-88} \cdot (-y) \\ & = vy - 43y^2 - xy \end{aligned}$$

$$\begin{aligned} 5. \quad & -\frac{35u}{u} - \frac{80bu}{-1} - \frac{627uz}{-33} + \frac{62}{62} \\ & = 80bu + 19uz - 34 \end{aligned}$$

Simplifying Expressions (J)

Simplify each expression.

1. $-\frac{24yz}{-y} + 85y - z + \frac{70a^2}{70a^2} + yz + 1$

2. $v + 19v \cdot 30 \cdot 7uy \cdot v + v^2 - 32 + 1$

3. $-49a + \frac{8u}{8u} + 73v - 11uv + 40 + \frac{uv}{uv}$

4. $-\frac{2v^2}{-1} - 86v + 1 + \frac{2279cvy}{43c} - cv + v$

5. $-1 + x^2 + 41bx - x^2 + x^2 + x^2 - \frac{1274x^2}{-13}$

Simplifying Expressions (J) Answers

Simplify each expression.

$$\begin{aligned} 1. & -\frac{24yz}{-y} + 85y - z + \frac{70a^2}{70a^2} + yz + 1 \\ & = yz + 23z + 85y + 2 \end{aligned}$$

$$\begin{aligned} 2. & v + 19v \cdot 30 \cdot 7uy \cdot v + v^2 - 32 + 1 \\ & = 3990uv^2y + v^2 + v - 31 \end{aligned}$$

$$\begin{aligned} 3. & -49a + \frac{8u}{8u} + 73v - 11uv + 40 + \frac{uv}{uv} \\ & = -11uv - 49a + 73v + 42 \end{aligned}$$

$$\begin{aligned} 4. & -\frac{2v^2}{-1} - 86v + 1 + \frac{2279cvy}{43c} - cv + v \\ & = 2v^2 + 53vy - cv - 85v + 1 \end{aligned}$$

$$\begin{aligned} 5. & -1 + x^2 + 41bx - x^2 + x^2 + x^2 - \frac{1274x^2}{-13} \\ & = 100x^2 + 41bx - 1 \end{aligned}$$