



Simplify

- |                                      |     |                                     |     |                                       |     |                                   |     |
|--------------------------------------|-----|-------------------------------------|-----|---------------------------------------|-----|-----------------------------------|-----|
| (a) $5c - d - 3d - 2c$               | [2] | (b) $5m^2 \times 2m^3$              | [2] | (c) $(x^8)^3$                         | [1] | (d) $\frac{w^2}{w^3}$             | [1] |
| (e) $4x^3y \times 5x^2y$             | [2] | (f) $36y^5 \div 4y^2$               | [2] | (g) $x^3 \div \frac{3}{x^5}$          | [1] | (h) $\frac{4(x-6)^2}{x-6}$        | [1] |
| (i) $\frac{x^3y+2xy^3}{x^2y^2}$      | [2] | (j) $\frac{3+x}{9-x^2}$             | [2] | (k) $\frac{4+10w}{8-50w^2}$           | [4] | (l) $\frac{ab-b^2}{a^2-b^2}$      | [3] |
| (m) $\frac{x^2-3x}{x^2-9}$           | [3] | (n) $\frac{2a+2b+3ay+3by}{a^2-b^2}$ | [3] | (o) $\frac{42np-7n}{12pt-2t+18mp-3m}$ |     |                                   | [4] |
| (p) $\frac{2x^2-x-1}{2x^2+x}$        | [4] | (q) $\frac{x^2+6x-7}{3x+21}$        | [4] | (r) $\frac{7x+21}{2x^2+9x+9}$         | [4] | (s) $\frac{4x^2-16x}{2x^2+6x-56}$ | [4] |
| (t) $\frac{x^2-x-20}{x^3-10x^2+25x}$ | [5] | (u) $\frac{h^2-h-20}{h^2-25}$       | [4] | (v) $\frac{x^2-5x+6}{x^2-4}$          | [4] | (w) $\frac{2x^2+5x-3}{2x^2-18}$   | [3] |
| (x) $\frac{x^2+12x+36}{x^2+4x-12}$   | [5] | (y) $\frac{x^2-3x+2}{x^2+3x-10}$    | [4] |                                       |     |                                   |     |



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**ANSWERS:**

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|-------------------------|------------------------|-------------------------|------------------------|---------------|
| a) $3c - 4d$            | b) $10m^5$             | c) $x^{24}$             | d) $1/w$               | e) $20x^5y^2$ |
| f) $9y^3$               | g) $x^8 / 3$           | h) $4(x - 6)$           | i) $(x^2 + 2y^2) / xy$ |               |
| j) $1 / (3 - x)$        | k) $1 / (2 - 5w)$      | l) $b/(a + b)$          | m) $x / (x + 3)$       |               |
| n) $(2 + 3y) / (a - b)$ | o) $7n / (2t + 3m)$    | p) $(x - 1)/x$          | q) $(x - 1)/ 3$        |               |
| r) $7 / (2x + 3)$       | s) $2x / (x + 7)$      | t) $(x + 4)/ x (x - 5)$ | u) $(h + 4)/(h + 5)$   |               |
| v) $(x - 3)/(x + 2)$    | w) $(2x - 1)/2(x - 3)$ | x) $(x + 6)/(x - 2)$    | y) $(x - 1)/ (x + 5)$  |               |