



# Formula Manipulation



Rearrange the following formulae to isolate the [indicated variable].

- $3a + 2b = c$  [a]
- $2x + 3y = 5z$  [x]
- $4p + 3q = 2r$  [q]
- $xy + z = q$  [y]
- $a - 3c = d$  [c]
- $p - qr = t$  [q]
- $3(x + y) = z$  [y]
- $2(3p - 5q) = 4s$  [q]
- $a(2b - 3c) = 5c$  [b]
- $x = \frac{y + z}{2}$  [z]
- $\frac{2m - 3n}{5} = 4p$  [m]
- $3a + 2b = \frac{b + c}{2}$  [c]
- $x + \frac{y}{2} = z$  [y]
- $p = \frac{q}{5} - 3r$  [q]
- $\frac{a}{2} + \frac{b}{3} = c$  [b]
- $\frac{p}{3} + \frac{q}{2} = \frac{r}{4}$  [p]
- $\frac{2x}{3} = \frac{5y}{6} - \frac{3x}{4}$  [y]
- $xy - zy = p$  [y]
- $pq = r - sq$  [q]
- $ab - 2b = a + c$  [a]
- $\frac{xy}{3} - \frac{xz}{8} = \frac{yz}{6}$  [y]
- $a + \frac{b}{c} = d$  [c]
- $p = \frac{q}{r} - s$  [r]
- $\frac{x}{y} - \frac{y}{z} = w$  [z]
- $\frac{3}{x} - \frac{2}{y} = \frac{5}{z}$  [y]
- $\frac{2}{b} = \frac{3}{a} + \frac{5}{c}$  [a]
- $\frac{a}{b + c} = d$  [c]
- $\frac{x}{y + z} = \frac{y}{x + z}$  [z]
- $x^2 = y$  [x]
- $5x^2 = y$  [x]
- $b^2a = c$  [b]
- $\frac{p^2}{q} = r$  [p]
- $3x = \frac{y}{x}$  [x]





$$33. \frac{3}{y} + \frac{2}{z^2} = x \quad [z]$$

$$34. a = \frac{3b}{c^2} + \frac{d}{3} \quad [c]$$

$$35. \sqrt{x} = y \quad [x]$$

$$36. \sqrt{x} = 3y \quad [x]$$

$$37. \sqrt{x} = y + 2 \quad [x]$$

$$38. c = \sqrt{ab} \quad [b]$$

$$39. \sqrt{ab} = cd \quad [a]$$

$$40. x = \sqrt{\frac{y}{z}} \quad [z]$$

$$41. 3x = 5\sqrt{y+z} \quad [z]$$

