Rearranging Formulae when the Subject Appears Twice

Make x the subject of each formula:

(a) $ax = bx + c$

(b) $ax = bx - c$

(c) $ax + c = bx + 2$

(d) $ax - d = bx + c$

(e) $ax - 2 = d - bx$

(a) $x = \frac{c}{a-b}$ (b) $x = \frac{c}{b-a}$

(c) $x = \frac{2-c}{a-b}$ (d) $x = \frac{c+d}{a-b}$

(e) $x = \frac{d+2}{a+b}$

Make x the subject of each formula:

(a) $a = \frac{bx}{x-2}$

(b) $2 = \frac{bx}{a+x}$

(c) $a = \frac{x+b}{x}$

(d) $2a = \frac{x}{x-1}$

(a) $x = \frac{2a}{a-b}$ (b) $x = \frac{2a}{b-2}$

(c) $x = \frac{b}{a-1}$ (d) $x = \frac{2a}{2a-1}$

Make x the subject of each formula:

(a) $a(x + 2) = bx - c$

(b) $a(b - x) = c(x + d)$

(c) $2b = \frac{x-a}{c+x}$

(d) $a = \frac{x+b}{x-b}$

(a) $x = \frac{2a+c}{b-a}$ (b) $x = \frac{ab-cd}{c+a}$

(c) $x = \frac{2bc+a}{1-2b}$ (d) $x = \frac{b(a+1)}{a-1}$

Make x the subject of each formula:

(a) $d = \sqrt{\frac{x-c}{x}}$

(b) $bx = c + \frac{x}{a}$

(c) $x = \sqrt{\frac{a+x^2}{b}}$

(d) $bx^3 = \frac{a^2-x^3}{c}$

(a) $x = \frac{c}{1-d^2}$ (b) $x = \frac{ac}{ab-1}$

(c) $x = \sqrt{\frac{a}{b-1}}$ (d) $x = \sqrt[3]{\frac{a^2}{bc+1}}$