Rearranging Formulae

Make a the subject of the following formulae:

1) $2a = b$
2) $\frac{a}{2} = b$
3) $a + 2 = b$
4) $a - 2 = b$
5) $\frac{a}{c} = b$
6) $\frac{a}{c} + 2 = b$
7) $ac = b$
8) $ac - 2 = b$
9) $ac - d = b$
10) $\frac{a+2}{c} = b$
11) $\frac{2a}{c} = b$
12) $\frac{d(a+2)}{c} = b$
13) $2a = b + a$
14) $2a + c = b + a$
15) $2a + c = b - a$
16) $ae + c = b + a$
17) $ae + c = b + af$
18) $ae + c = b - af$

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13) $2a = b + a$
14) $2a + c = b + a$
15) $2a + c = b - a$
16) $ae + c = b + a$
17) $ae + c = b + af$
18) $ae + c = b - af$

Answers/Worked Solutions

① $\frac{2a}{2} = \frac{b}{2}$

$a = \frac{b}{2}$

② $\frac{a}{2} = b$

$\times 2 \quad \times 2$

$a = 2b$

③ $a + 2 = b$

$-2 \quad -2$

$a = b - 2$

④ $a - 2 = b$

$+2 \quad +2$

$a = b + 2$

⑤ $\frac{a}{c} = b$

$\times c \quad \times c$

$a = bc$

⑥ $\frac{a}{c} + 2 = b$

$-2 \quad -2$

$\frac{a}{c} = b - 2$

$\times c \quad \times c$

$a = c(b-2)$

⑦ $\frac{ac}{c} = \frac{b}{c}$

$a = \frac{b}{c}$

⑧ $ac - 2 = b$

$+2 \quad +2$

$\frac{ac}{c} = \frac{b+2}{c}$

$a = \frac{b+2}{c}$

⑨ $ac - d = b$

$+d \quad +d$

$\frac{ac}{c} = \frac{b+d}{c}$

$a = \frac{b+d}{c}$

⑩ $\frac{a+2}{c} = b$

$\times c \quad \times c$

$a + 2 = bc$

$-2 \quad -2$

$a = bc - 2$

⑪ $\frac{2a}{c} = b$

$\times c \quad \times c$

$\frac{2a}{2} = \frac{bc}{2}$

$a = \frac{bc}{2}$

⑫ $\frac{d(a+2)}{c} = b$

$\times c \quad \times c$

$\frac{d(a+2)}{d} = \frac{bc}{d}$

$a + 2 = \frac{bc}{d}$

$-2 \quad -2$

$a = \frac{bc}{d} - 2$

⑬ $2a = b + a$

$-a \quad -a$

$a = b$

⑭ $2a + c = b + a$

$-a \quad -a$

$a + c = b$

$-c \quad -c$

$a = b - c$

⑮ $2a + c = b - a$

$+a \quad +a$

$3a + c = b$

$-c \quad -c$

$\frac{3a}{3} = \frac{b-c}{3}$

$a = \frac{b-c}{3}$

⑯ $ae + c = b + a$

$-a \quad -a$

$ae - a + c = b$

$-c \quad -c$

$ae - a = b - c$

FACTORISE!

$\frac{a(e-1)}{e-1} = \frac{b-c}{e-1}$

$a = \frac{b-c}{e-1}$

⑰ $ae + c = b + af$

$-af \quad -c \quad -c \quad -af$

$ae - af = b - c$

FACTORISE!

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

$a = \frac{b-c}{e-f}$

⑱ $ae + c = b + af$

$+af \quad -c \quad -c \quad +af$

$ae + af = b - c$

FACTORISE!

$\frac{a(e+f)}{e+f} = \frac{b-c}{e+f}$

$a = \frac{b-c}{e+f}$