Multi-Stage Equations PPQ's

(1) $6x - 9 = 18$.

$6x = 18 + 9$

$6x = 27$

$x = \frac{27}{6}$

[3]

(2) Solve $4x - 7 = 3$.

$4x = 3 + 7$

$4x = 10$

$x = \frac{10}{4}$

[2]

(3) *(a)* Solve $7x + 2 = 3 + 5x$.

$7x - 5x = 3 - 2$

$2x = 1$

$x = \frac{1}{2}$

[3]

(b) Solve $3x + 4 = 8 - 7x$.

$3x + 7x = 8 - 4$

$10x = 4$

$x = \frac{4}{10}$

[2]

(4) Solve the equation

$6x - 7 = 2x + 11$.

$6x - 2x = 11 + 7$

$4x = 18$

$x = \frac{18}{4}$

[3]

(5) Solve $7(x - 4) = 3x - 10$. $7(x-4) = 3x - 10$

$+7x \quad -28 = +3x \quad -10$

$7x - 3x = -10 + 28$

$4x = 18$

$x = \frac{18}{4}$

[3]

(6) Solve $7x - 13 = 3(x - 1)$. $+7x \quad -13 = +3x \quad -3$

$7x - 4x = -3 + 13$

$3x = 10$

$x = \frac{10}{3}$

[3]

(7) Solve $7e + 12 = 3(e + 6)$. $+7e \quad +12 = +3e \quad +18$

$7e - 3e = 18 - 12$

$4e = 6$

$e = \frac{6}{4}$

(8) Solve **each** of the following equations.

(i) $7x + 4 = 3x + 16$

$7x - 3x = 16 - 4$

$4x = 12$

$x = \frac{12}{4}$

$x = 3$

(ii) $3x + 2 = 2(3 - 2x)$ $+3x \quad +2 = +6 \quad -4x$

$3x + 4x = 6 - 2$

$7x = 4$ $\Rightarrow$ $x = \frac{4}{7}$