

Equations Level 4 SI-S3 National 4

1a) $4x = 12$ b) $2x = 10$ c) $6x = 48$ d) $3x + 3 = 22$
 $x = 3$ $x = 5$ $x = 8$ $3x = 19$
 $x = \frac{19}{3}$

e) $3x - 4 = 12$
 $3x = 16$
 $x = \frac{16}{3}$

2. a) $5x \leq 25$ b) $6x \leq 21$ c) $15 < 3x$
 $x \leq 5$ $x \leq \frac{21}{6}$ $5 < x$
 $x \leq 3.5$ $x > 5$

3 a) $A = 3(2x+4) + \frac{1}{2} \times 6 \times (2x+4)$
 $= 6x + 12 + 6x + 12$
 $= 12x + 24$

b) & c) $12x + 24 = 54$ ~~200~~
 $12x = 30$
 $x = 2.5$

4. a) $9u = 15$ b) $2r = 9$ c) $2d = 8$ d) $5y = 30$ e) $v = 1$
 $u = 3.75$ $r = 4.5$ $d = 4$ $y = 6$

f) $-12 = 6h$
 $h = -2$

5 a) $2x + 2 = 8$ b) $4k - 4 = 20$ c) $6x + 2 = 2x + 22$ d) $5y - 9 = 2y - 30$
 $2x = 6$ $4k = 24$ $4x = 20$ $3y = -21$
 $x = 3$ $k = 6$ $x = 5$ $y = -7$

e) $4 - 10w - 35 = 2w + 5$ f) $10 - 5t - 4 = 2t - 15$
 $-36 = 12w$ $21 = 7t$
 $w = -3$ $t = 3$

6. a) $4x + 10 = 7$ b) $16 - 15 + 10x = 0$ c) $12(1 + 2x) = 45$ d) $\frac{5}{9} - \frac{2}{3} + \frac{2}{3}x = \frac{3}{7}$
 $4x = -3$ $10x = -1$ $12 + 24x = 45$ $10 - 12 + 12x = 27$
 $x = \frac{-3}{4}$ $x = \frac{-1}{10}$ $24x = 33$ $12x = 29$
 $x = \frac{33}{24} = \frac{11}{8}$ $x = \frac{29}{12}$