

Review – Equation solving and the cross multiplying method

Solve the following equations

Part 1

| | | | |
|-------------------------|-------------------------|---------------------|---------------------|
| $\frac{x}{2} = 22$ | $\frac{3x}{5} = 11$ | $\frac{15x}{7} = 6$ | $5 = \frac{3x}{8}$ |
| $\frac{3x}{2} + 3 = 22$ | $\frac{5x}{7} - 4 = 11$ | $\frac{3}{2x} = 11$ | $\frac{14}{3x} = 6$ |

Part 2

| | | |
|----------------------------------|-----------------------------------|-----------------------|
| $\frac{x+2}{3} = 11$ | $\frac{3x+2}{5} = 3$ | $\frac{5}{3x+2} = 11$ |
| $\frac{4x+2}{3} = \frac{x-7}{5}$ | $\frac{3x-2}{3} = \frac{5x+4}{5}$ | $\frac{5}{7-2x} = 4$ |

Part 3

| | | |
|-----------------------------------|-----------------------------------|-----------------------------------|
| $\frac{4x+2}{3x+7} = \frac{3}{2}$ | $\frac{5-2x}{3} = 3x$ | $\frac{7x+2}{3x} = 4$ |
| $\frac{1}{5x-3} = \frac{2}{3}$ | $\frac{1}{5x-3} = \frac{1}{3x-2}$ | $\frac{3-2x}{4x-3} = \frac{2}{7}$ |

Extension: expand the following brackets

| | |
|-----------------|----------------|
| $(x+9)(x+7)$ | $(2x+3)(x+4)$ |
| $(3x+4)(2x+5)$ | $(5x+3)(2x-4)$ |
| $(x+y)(x+y)$ | $(2x+y)(x+y)$ |
| $(3x+z)(2x+3z)$ | $(4z-2y)^2$ |

Simplify the following expressions

| | |
|---------------------------|----------------------|
| $3(x+2) + 11$ | $3(2x+8) + 10$ |
| $4(x+2) + 3(x+8)$ | $3(2x+8) + 4(3x-10)$ |
| $(x+1)(x+2) + (x+9)(x+3)$ | $4(x+9) - 3(x-11)$ |