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Analytical methods
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exam 1

i) $y = 2\sqrt{\frac{3}{x^3}}$

$$12/y^2 = x^2$$

$$y/2 = \sqrt{3/x^2}$$

$$y^2/4 = 3/x^2$$

$$4/y^2 = x^2/3$$

$$12/y^2 = x^2/3$$

$$x = \sqrt{12}/y^2$$

$$x = \frac{\sqrt{12}}{y}$$

b) $\frac{2x+3}{4} = \frac{5x+1}{-3}$

$$-3(2x+3) = 4(5x+1)$$

$$-6x + -9 = 20x + 4$$

$$-9 - 4 = 20 + 6x$$

$$-13 = 26x$$

$$x = 0.5$$

ii) $\frac{(x-1)}{2} - \frac{5x}{4} = \frac{(x+2)}{2}$ C.F = 4

$$4\left(\frac{x-1}{2}\right) - 4\left(\frac{5x}{4}\right) = 4\left(\frac{x+2}{2}\right)$$

$$2(x-1) - 5x = 2(x+2)$$

$$2x - 2 - 5x = 2x + 4$$

$$2x - 5x + 2x = 4 + 2$$