



A drinks dispenser holds 8 litres of fruit juice, to the nearest litre. 8.5 L

Each glass holds 200ml to the nearest 10ml. 195 ml

Work out the greatest possible number of glasses that can be filled.

$$8500 \div 195 = 43.589\dots$$

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Make  $m$  the subject

$$m(r + p) = r(h - m)$$

$$mr + pm = hr - mr$$

$$mr + pm + mr = hr$$

$$2mr + pm = hr$$

$$m(2r + p) = hr$$

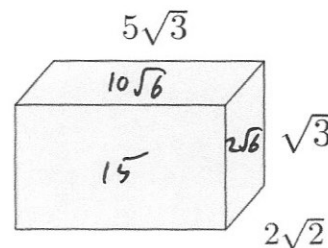
$$m = \frac{hr}{2r + p}$$

Shown is a cuboid with measurements in centimetres.

Work out the surface area

$$2(15 + 12\sqrt{6})$$

$$30 + 24\sqrt{6} \text{ cm}^2$$



Solve

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

$$\frac{2(x-2) + 2x-1}{(2x-1)(x-2)} = 1$$

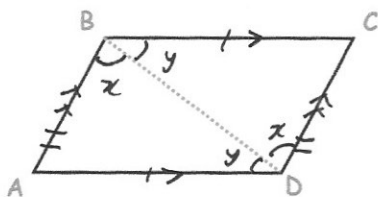
$$2x - 4 + 2x - 1 = 2x^2 - 5x + 2$$

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

$$0 = 2x^2 - 9x + 7$$

$$0 = (2x - 7)(x - 1)$$

$$x = \frac{7}{2} \text{ or } x = 1$$



ABCD is a parallelogram.

Prove that triangles ABD and BCD are congruent.

$$\left. \begin{array}{l} \angle OBC = \angle OAD = y \\ \angle ABO = \angle CDO = x \end{array} \right\} \begin{array}{l} \text{alternate} \\ \text{angles} \\ \text{are equal.} \end{array}$$

BO is shared.

Congruent due to ASA.