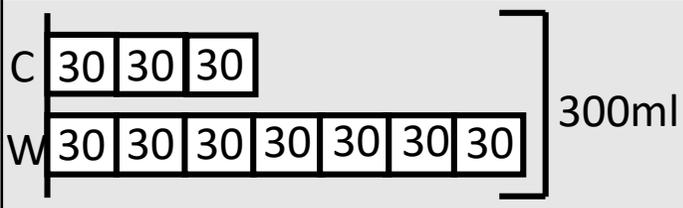


Ratio and Bar Models

Orange juice is made by mixing cordial and water in the ratio 3:7

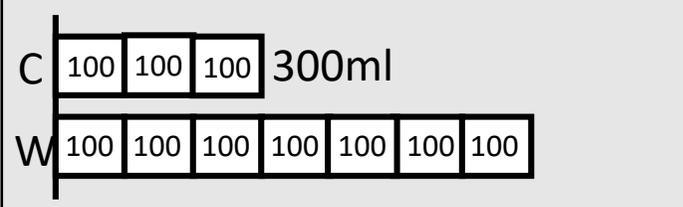
How much cordial is needed for 300ml of orange juice?



$300 \div 10 = 30$
 $30 \times 3 = 90$

90ml of cordial is needed

300ml of cordial is used. How much water is needed?



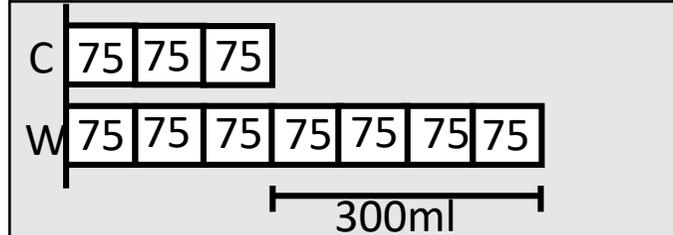
$300 \div 3 = 100$
 $100 \times 7 = 700$

700ml of water is needed

Ratio and Scale

Ratio	A ratio compares the sizes of two or more values
Proportion	A part, share or number considered in relation to a whole
Diameter	The distance from one point on a circle to another point on the circle through the centre
Radius	The distance from the centre of a circle to a point on the circle
Circumference	The distance around the edge of a circle
Gradient	The steepness of a line

300ml more water is used. How much juice is made?



$300 \div 4 = 75$
 $75 \times 10 = 750$

750ml of juice is made

Multiplicative Change

Direct Proportion	Two quantities are in direct proportion when as one increases or decreases, the other increases or decreases at the same rate
Constant	Not changing
Multiplier	A number you multiply by
Conversion Graph	A graph used to change from one unit to another
Axis	A reference line on a graph
Exchange Rate	The value of a currency compared to another currency
Similar	Two shapes are similar if their corresponding sides are in the same ratio
Enlargement	Making a shape bigger or smaller
Scale Factor	How much a shape has been enlarged by
Scale	The ratio of the length in a drawing or a model to the actual object
Scale Drawing	A diagram that represents a real object with accurate sizes reduced or enlarged by a ratio
Map	A diagram of a place, such as a town or a country