

Limo Limits – Solution

Solution 1:

20 children weigh the same as 15 adults.

Dividing each of these by five gives 4 children weigh the same as 3 adults.

The table below lists equivalent weights of children and adults based on this ratio.

Children	Adults
20	15
16	12
12	9
8	6
4	3

Since there are already 12 children in the limousine, 8 more children could fit in. Since 8 children weigh the same as 6 adults, six more adults could fit in the limousine.

Solution 2:

20 children weigh the same as 15 adults, therefore $20 \text{ children} = 15 \text{ adults}$.

To find the unit rate for 1 child, divide both sides of the equation by 20.

Therefore, $1 \text{ child} = \frac{3}{4} \text{ adult}$.

If we have 12 children in the limo already, there is room for 8 more children. Each child weighs the same as $\frac{3}{4}$ adult, so we have room for $8(\frac{3}{4})$ more, or 6 adults.