

Tuesday Diving

- 1) These division statements all show the correct answer to $252 \div 8$. True or false? Explain your answer.

- a) $252 \div 8 = 31.5$
 b) $252 \div 8 = 31r4$
 c) $252 \div 8 = \frac{1}{4}$



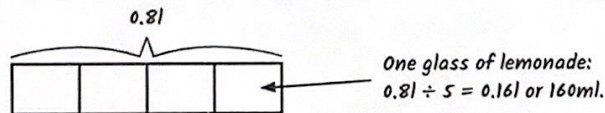
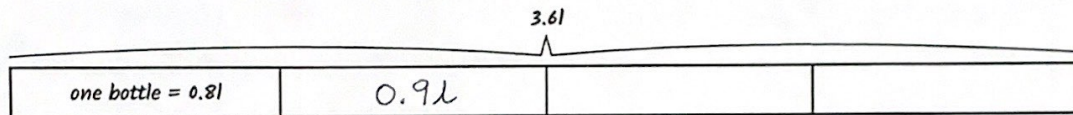
a) and b) are the same, but c) cannot be true. $\frac{1}{4} \times 8 = 2$

- 2) Jack is solving the problem given below:

Emily buys a total of 3.6l of lemonade in four bottles. She pours one bottle out into glasses to share equally between her five friends and herself. How much lemonade will there be in each glass?



Jack decides to use bar models to help him solve the problem:



Look carefully at Jack's bar models and answers. Explain what he has done wrong and give any corrections that need to be made.

$4 \overline{) 3.6} \begin{matrix} .90 \\ \underline{36} \\ 0 \end{matrix}$ Jack miscalculated $3.6 \div 4$. It should have been 0.9l. He then divided by 4, when he should have divided by 6.

$$6 \overline{) 0.930} \begin{matrix} 0.15 \\ \underline{60} \\ 330 \\ \underline{300} \\ 300 \\ \underline{300} \\ 0 \end{matrix}$$

Each glass will have 0.15 of a litre.

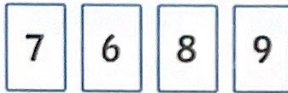


1) Each of these sets of calculations has the same number missing from each box. Look at the statements given to help you decide which number is missing.

<p>a)</p> $55.2 + \boxed{3} = 18.4$ $31.2 + \boxed{3} = 10.4$ $23.7 + \boxed{3} = 7.9$	<p>The difference between the greatest and the smallest answer in this group of calculations is 10.5.</p>	<p>b)</p> $100.8 + \boxed{6} = 16.8$ $100.8 - \boxed{6} = 94.8$ $100.8 + \boxed{6} = 106.8$	<p>The difference between the greatest and the smallest answer in this group of calculations is 90.</p>
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2) Use three of the numbers on the digit cards shown below to complete each of these division calculations. A digit card can only be used once in each calculation.

- a) $\square \square \square \div \square = 1.2$
 b) $\square \square \square \div \square = 1.4$
 c) $\square \square \square \div \square = 0.95$



Various different calculations.

3) Now use four of numbers on the digit cards shown below to complete this missing number calculation. Show at least five different examples. A digit card can only be used once in each calculation.

$\boxed{3} \boxed{4} \boxed{5} \boxed{2} \boxed{6} \quad \square \square \square \div \square = \underline{\hspace{2cm}}$

$\begin{array}{r} 18.4 \\ 3 \overline{) 55.12} \\ \underline{31} \\ 24 \\ \underline{21} \\ 32 \\ \underline{30} \\ 20 \\ \underline{18} \\ 20 \\ \underline{18} \\ 20 \end{array}$	$\begin{array}{r} 6 \\ 16.8 \\ 94.8 \\ 106.8 \end{array}$	$\begin{array}{r} 2 \\ 102.8 \\ 50.4 \\ 98.8 \\ \hline 52.4 \end{array}$	$\begin{array}{r} 10 \\ 10.08 \\ 90.8 \\ 110.8 \\ \hline 100 \end{array}$	$\begin{array}{r} 8 \\ 12.6 \\ 92.8 \\ 108.8 \end{array}$
$\begin{array}{r} 12.6 \\ 8 \overline{) 100.8} \\ \underline{64} \\ 36 \\ \underline{32} \\ 40 \\ \underline{32} \\ 80 \\ \underline{72} \\ 80 \\ \underline{72} \\ 80 \end{array}$	$\begin{array}{r} 16.8 \\ 6 \overline{) 104.8} \\ \underline{36} \\ 68 \\ \underline{60} \\ 80 \\ \underline{72} \\ 80 \\ \underline{72} \\ 80 \end{array}$	$\begin{array}{r} 108.8 \\ 12.6 \\ \hline 96.2 \end{array}$		