## Percentages Tick or Trash

Who is correct? Jenny or Joshua? Prove it by showing the correct working
Extension: Can you explain what mistake was made?

| No | Question | Working | Jenny | Joshua |
| :---: | :---: | :---: | :---: | :---: |
| 1 | Order these smallest to biggest: $0.5,3 / 4,20 \%, 1 / 10$ |  | $\begin{gathered} 0.5,1 / 10,3 / 4 \\ 20 \% \end{gathered}$ | $\begin{gathered} 1 / 10,20 \%, 0.5 \\ 3 / 4 \end{gathered}$ |
| 2 | Find $45 \%$ of 80 |  | 36 | 178 |
| 3 | What is bigger? $86 \%$ of 90 $90 \%$ of 85 |  | $86 \%$ of 90 | 90\% of 85 |
| 4 | What is $3 \%$ as a decimal? |  | 0.3 | 0.03 |
| 5 | What is 1.7 as a percentage? |  | 170\% | 17\% |
| 6 | There are 35 choc and caramel sweets in a bag. 20\% are caramel. How many are choc? |  | 7 | 28 |
| 7 | £72 trainers are reduced by $15 \%$ in the sale. How much are they now? |  | £10.80 | £61.20 |
| 8 | A 330 ml can of pop has $10 \%$ extra free. How much is in it now? |  | 363 ml | 340 ml |
| 9 | A jacket costs $£ 60$ in the sale. If the discount was 20\%, how much was it full price? |  | £72 | £75 |
| 10 | There are 30 pupils in a class. $30 \%$ walk, $1 / 6$ cycle, how many come by bus? |  | 16 | 14 |

## Percentages Tick or Trash: Solutions

Extension: Can you explain what mistake was made?

| No | Question | Error | Jenny | Joshua |
| :---: | :---: | :---: | :---: | :---: |
| 1 | Order these smallest to biggest: $0.5,3 / 4,20 \%, 1 / 10$ |  | $\begin{gathered} 0.5,1 / 10,3 / 4 \\ 20 \% \end{gathered}$ | $\begin{gathered} 1 / 10,20 \%, 0.5, \\ 3 / 4 \end{gathered}$ |
| 2 | Find 45\% of 80 | Jenny: $80 \times 45 \div 100$ Joshua: $80 \times 100 \div 45$ | 36 | 178 |
| 3 | What is bigger? <br> $86 \%$ of 90 <br> $90 \%$ of 85 | Consider the actual calculations: $\begin{aligned} & 90 \times 86 \div 100 \\ & 90 \times 85 \div 100 \end{aligned}$ | $86 \%$ of 90 | 90\% of 85 |
| 4 | What is $3 \%$ as a decimal? | Jenny divided by 10 not 100 | 0.3 | 0.03 |
| 5 | What is 1.7 as a percentage? | Joshua multiplied by 10, not 100 | 170\% | 17\% |
| 6 | There are 35 choc and caramel sweets in a bag. 20\% are caramel. How many are choc? | Jenny found the number of caramels, not choc | 7 | 28 |
| 7 | £72 trainers are reduced by $15 \%$ in the sale. How much are they now? | Jenny found the discount, not the price | £10.80 | £61.20 |
| 8 | A 330 ml can of pop has 10\% extra free. How much is in it now? | Josh added on 10 , not calculated 10\% | 363 ml | 340 ml |
| 9 | A jacket costs $£ 60$ in the sale. If the discount was 20\%, how much was it full price? | Jenny found $20 \%$ of 60 and added it on | £72 | £75 |
| 10 | There are 30 pupils in a class. $30 \%$ walk, $1 / 6$ cycle, how many come by bus? | Joshua found the total number who walked and cycled | 16 | 14 |

