# Fractions to Percentages

**1. Isabelle has a range of fractions and percentages written on different cards.**

**When converted to percentages, she has created 3 different groups of cards which total 100% containing no more than 3 cards.**

| Card A | Card B | Card C | Card D | Card E | Card F | Card G |
|---|---|---|---|---|---|---|
| 2% | 16% | 32% | $\frac{2}{5}$ | 2% | $\frac{3}{10}$ | $\frac{2}{20}$ |

| Card H | Card I | Card J | Card K | Card L | Card M | Card N |
|---|---|---|---|---|---|---|
| $\frac{17}{25}$ | $\frac{2}{4}$ | $\frac{17}{50}$ | $\frac{1}{2}$ | 18% | 10% | $\frac{50}{100}$ |

**Explore the different possible combinations of cards she could have placed in each group.**

**Is it possible to make a group containing four or more cards to total 100%?**

DP

**2. Mr Payne has marked some tests and is trying to work out the final percentage scored by each student.**

**He says,**



> Each test is out of 100. Two students have managed to score a final percentage above 65%.

| Student | Test A | Test B | Total marks from both tests | Final % |
|---|---|---|---|---|
| Tabitha | 66% | $\frac{19}{25}$ | $\frac{142}{200}$ | |
| Erin | $\frac{2}{5}$ | $\frac{17}{50}$ | $\frac{74}{200}$ | |
| Daniel | $\frac{1}{2}$ | 68% | $\frac{118}{200}$ | |
| Jacob | 58% | $\frac{6}{10}$ | $\frac{118}{200}$ | |
| Serenity | $\frac{12}{20}$ | 70% | $\frac{130}{200}$ | |
| Michael | | | | |

**Complete the table and investigate whether Mr Payne is correct.**

**Michael has managed to score a final percentage that is higher than Jacob, but lower than Serenity. Explore what his results could be.**

DP

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**1. Isabelle has a range of fractions and percentages written on different cards.**

**When converted to percentages, she has created 3 different groups of cards which total 100% containing no more than 3 cards.**

| Card A | Card B | Card C | Card D | Card E | Card F | Card G |
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| 2% | 16% | 32% | $\frac{2}{5}$ | 2% | $\frac{3}{10}$ | $\frac{2}{20}$ |

| Card H | Card I | Card J | Card K | Card L | Card M | Card N |
|---|---|---|---|---|---|---|
| $\frac{17}{25}$ | $\frac{2}{4}$ | $\frac{17}{50}$ | $\frac{1}{2}$ | 18% | 10% | $\frac{50}{100}$ |

**Explore the different possible combinations of cards she could have placed in each group.**

**Various answers, for example:**

**Group 1 = Cards A, H and F, Group 2 = Cards B, J and K, Group 3 = Cards I and N.**

**Is it possible to make a group containing four or more cards to total 100%?**

**Various answers, for example: Cards C, D, L and M**

DP

**2. Mr Payne has marked some tests and is trying to work out the final percentage scored by each student.**

**He says,**



> Each test is out of 100. Two students have managed to score a final percentage above 65%.

| Student | Test A | Test B | Total marks from both tests | Final % |
|---|---|---|---|---|
| Tabitha | 66% | $\frac{19}{25}$ | $\frac{142}{200}$ | 71% |
| Erin | $\frac{2}{5}$ | $\frac{17}{50}$ | $\frac{74}{200}$ | 37% |
| Daniel | $\frac{1}{2}$ | 68% | $\frac{118}{200}$ | 59% |
| Jacob | 58% | $\frac{6}{10}$ | $\frac{118}{200}$ | 59% |
| Serenity | $\frac{12}{20}$ | 70% | $\frac{130}{200}$ | 65% |
| Michael | 45% | $\frac{3}{4}$ | $\frac{120}{200}$ | 60% |

**Complete the table and investigate whether Mr Payne is correct.**

**No, Mr Payne is incorrect. Tabitha is the only student who has scored a final percentage above 65%.**

**Michael has managed to score a final percentage that is higher than Jacob, but lower than Serenity. Explore what his results could be.**

**Various answers, for example: see above.**

DP

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