

GCSE - Numeracy and Mathematics

Topic: Equivalent Fractions including addition and subtraction

Tier: Intermediate

Grade:

E/D



Starter

Calculate: $\frac{1}{2} + \frac{1}{4} =$

Simplify: $\frac{25}{80} =$

Awgrymiadau!

- Find the highest common factor in Order to simplify a fraction:
- You must get the denominator (bottom) Same to add or subtract fractions
- **Ensure you can use the fraction button on the calculator!**

$$\frac{27 \div 9}{45 \div 9} = \frac{3}{5}$$

$$\frac{\frac{1}{3} + \frac{1}{2}}{\frac{2}{6} + \frac{3}{6}} = \frac{\frac{5}{6}}{\frac{5}{6}}$$

Skills:

1. Write down two different fractions that are equivalent to $\frac{4}{5}$

2. Write down $\frac{1}{5}$, $\frac{3}{8}$ a $\frac{3}{20}$ in ascending order. Show all your working:

3. Calculate: $\frac{2}{3} + \frac{13}{5}$

4. Calculate: $2\frac{1}{4} \times 4\frac{2}{3}$

Examination Question:

2013 November Linear P1 Higher Qu 6

Manilo won some money.

He gave each of his close friends $\frac{1}{24}$ of the money he won.

He kept the remaining $\frac{2}{3}$ of the money for himself.

How many close friends does Manilo have? [3]

2015 November Linear P1 Higher Qu 3

Idris comes from a very large family.

He has many relatives, all of whom live in Canada, Japan or Wales.

$\frac{1}{5}$ of his relatives live in Canada, $\frac{3}{8}$ of his relatives live in Japan.

All 34 of his other relatives live in Wales.

How many relatives does Idris have altogether? [5]

Assessment for Learning

Video / QR code



Starter

Calculate: $\frac{1}{2} + \frac{1}{4} = \frac{3}{4}$

Simplify: $\frac{25}{80} = \frac{5}{16}$

Awgrymiadau!

- Find the highest common factor in Order to simplify a fraction:
- You must get the denominator (bottom) Same to add or subtract fractions
- **Ensure you can use the fraction button on the calculator!**

$$\frac{27 \div 9}{45 \div 9} = \frac{3}{5}$$

$$\frac{\frac{1}{3} + \frac{1}{2}}{\frac{2}{6} + \frac{3}{6}} = \frac{\frac{5}{6}}{\frac{5}{6}}$$

Skills:

5. Write down two different fractions that are equivalent to $\frac{4}{5}$

$\frac{8}{10}, \frac{12}{15}$

6. Write down $\frac{1}{5}, \frac{3}{8}$ a $\frac{3}{20}$ in ascending order. Show all your working:

$$\frac{8}{40}, \frac{15}{40}, \frac{6}{40}$$

$$\frac{3}{20}, \frac{1}{5}, \frac{3}{20}$$

7. Calculate: $\frac{2}{3} + \frac{13}{5}$

$$\frac{10}{15} + \frac{39}{15} = \frac{49}{15}$$

8. Calculate: $2\frac{1}{4} \times 4\frac{2}{3}$

$$\frac{9}{4} \times \frac{14}{3}$$

$$\frac{126}{12}$$

$$\frac{21}{2}$$

Examination Question:

2013 November Linear P1 Higher Qu 6

Manilo won some money.

He gave each of his close friends $\frac{1}{24}$ of the money he won.

He kept the remaining $\frac{2}{3}$ of the money for himself.

How many close friends does Manilo have? [3]

$$\frac{16}{24}, \frac{1}{24}$$

$$24 - 16 = 8 \text{ close friends}$$

2015 November Linear P1 Higher Qu 3

Idris comes from a very large family.

He has many relatives, all of whom live in Canada, Japan or Wales.

$\frac{1}{5}$ of his relatives live in Canada, $\frac{3}{8}$ of his relatives live in Japan.

All 34 of his other relatives live in Wales.

How many relatives does Idris have altogether? [5]

$$\frac{1}{5} = \text{Canada}$$

$$\frac{3}{8} = \text{Japan}$$

$$\frac{1}{5} + \frac{3}{8} = \frac{8}{40} + \frac{15}{40} = \frac{23}{40} \text{ (Canada and Japan)}$$

$$\frac{17}{40} = 34 \text{ (Wales)}$$

$$17 = 34$$

$$23 = ?$$

$$17 \times ? = 34 \times 23$$

$$? = \frac{34 \times 23}{17}$$

$$? = 46$$

$$\text{Total} = 34 + 46 = 80 \text{ relatives}$$

