

Worksheet 4

Try all of this worksheet without a calculator

Comparing and recognising fractions

1) Simplify $\frac{12}{16}$

2) Find the missing numbers in this chain of fractions

$$\frac{2}{3} = \frac{?}{9} = \frac{12}{?} = \frac{?}{21}$$

3) Which is the larger of $\frac{7}{9}$ and $\frac{3}{4}$?

You must show a calculation

4) Find the fraction that lies half way between $\frac{2}{3}$ and $\frac{4}{5}$

Hint: write both fractions over the denominator 30

5) Which of the fractions below are equivalent to $\frac{3}{4}$?

$$\frac{75}{100}, \quad \frac{26}{36}, \quad \frac{16}{20}, \quad \frac{45}{60}, \quad \frac{49}{63}$$

6) Put the fractions below in order of size starting with the smallest

$$\frac{2}{5}, \quad \frac{1}{4}, \quad \frac{1}{3}, \quad \frac{2}{9}, \quad \frac{3}{8}$$

7) Which is the smaller of $\frac{2}{3}$ and $\frac{3}{5}$?

You must show a calculation

8) Find the fraction that lies half way between $\frac{1}{2}$ and $\frac{3}{4}$

Hint: write both fractions over the denominator 8

9) Write down three fractions that are equivalent to $\frac{3}{5}$

Add, subtract, divide and multiply fractions

1) Work out $\frac{2}{3} \times \frac{1}{5}$

2) Calculate the value of $\frac{3}{5} \times 650$

3) Work out $\frac{1}{4} + \frac{2}{3}$

4) Work out $\frac{2}{3} - \frac{2}{5}$

5) Calculate the value of $\frac{1}{4} \times 84$

6) Work out $\frac{1}{2} + \frac{3}{8}$

7) Work out $\frac{1}{3} + \frac{1}{6}$

8) Work out $\frac{2}{5} \times \frac{3}{8}$

9) Calculate the value of $12 \div \frac{1}{4}$

10) Work out the value of $(\frac{3}{5})^2$

11) Work out $\frac{3}{4} \div \frac{2}{5}$

12) Calculate the value of $1 - \frac{1}{2} \times \frac{3}{5}$

Hint: BIDMAS applies to fractions!

13) Work out the value of $\frac{2}{3} \div \frac{1}{2}$

Mixed numbers and top heavy fractions

- 1) Convert $2\frac{3}{4}$ to an improper fraction
- 2) Convert $\frac{20}{7}$ to a mixed number
- 3) Work out $5\frac{2}{5} + 7\frac{3}{10}$ and give your answer as a mixed number
- 4) Work out $3\frac{3}{4} - 2\frac{1}{2}$ and give your answer as a mixed number
- 5) Work out $2\frac{1}{4} \times 1\frac{1}{2}$ and give your answer as a mixed number
- 6) Work out $4\frac{1}{5} - 3\frac{1}{2}$ and give your answer as a mixed number
- 7) Work out $2\frac{7}{8} + \frac{3}{5}$ and give your answer as a mixed number

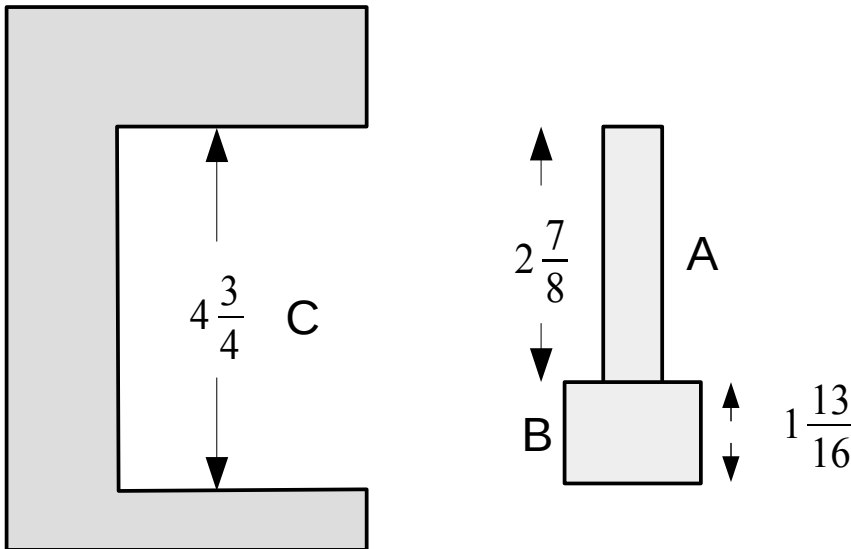
Decimal arithmetic

- 1) Work out $0.75 + 2 + 0.3 + 0.055$
- 2) Work out $1 - 0.375$
- 3) Work out 0.65×350
- 4) Work out $1 - (2 + 0.35 - 1.8)$
- 5) Work out 0.25×1.2
- 6) Work out 6.5×9.1
- 7) Work out $7.2 \div 9$
- 8) Work out $5 \div 0.4$
- 9) Work out $\frac{3.5 - 1.9}{12.7 - 12.5}$

Hint BIDMAS still applies and the fraction bar means \div

Story problems involving fractions and decimals

- 1) A drink needs 125ml orange to every litre of water
What fraction of the drink is orange juice?
Give your answer in its simplest form
- 2) Ethel buys a bus pass each month for £60. She is paid £900 a month. What fraction of her pay does Ethel spend on the bus pass?
Give your answer in its simplest form
- 3) The sketch below (not to scale) shows the dimensions of two parts A and B. Show that the parts A and B will fit into the space in the bracket C.



- 4) A mortgage company offers a mortgage to the value of the total of $3\frac{1}{2}$ times the larger salary and 1 times the smaller salary.
Ethel and Algernon earn £29 500 and £11 650 per year respectively.
They want to buy a house valued at £135 000.
What deposit will they need to find?
- 5) Work out $2\frac{1}{2} \times 3\frac{2}{5} - 1\frac{7}{8} \times 2\frac{7}{10}$
BIDMAS applies!