

Equivalence

a) Make the fractions equivalent:

$$\frac{3}{\quad} = \frac{\quad}{12} = \frac{12}{16} = \frac{54}{\quad}$$

b) Write in its simplest terms:

$$\frac{312}{858} =$$

c) Write as a mixed number:

$$\frac{94}{7} =$$

d) Write as an improper fraction:

$$5\frac{4}{9} =$$

Fraction arithmetic

Evaluate:

a) $\frac{1}{2} + \frac{1}{3} + \frac{1}{8} =$

b) $2\frac{1}{4} - \frac{5}{6} =$

c) $\frac{4}{5} \times 1\frac{1}{3} =$

d) $1\frac{2}{3} \div \frac{2}{9} =$

e) $\frac{7}{8} \div \frac{2}{3} \times \frac{2}{5} =$

Decimal arithmetic

Use a handwritten method to calculate:

a) $5.19 - 3.4 + 2.078 =$

b) $0.15 \times 6.3 =$

c) $2.64 \div 3.2 =$

d) $(0.3)^3 =$

Percentage change

Find the percentage change in price when a guitar is reduced from £320 to £280.

Compound interest

£3200 is invested in an account that receives 2.5% compound interest per annum. What is the total value of the investment after 4 years?

The value of a car decreases by 10% each year. If it was bought for £8000, how much is it worth five years later?

Comparing fractions and decimals

Use =, <, or >:

a) $\frac{3}{5} \text{ — } \frac{6}{11}$

b) $\frac{5}{8} \text{ — } 0.625$

c) $1\frac{5}{6} \text{ — } \frac{44}{24}$

d) $\frac{13}{8} \text{ — } 1.63$

e) $\frac{3}{7} \text{ — } 0.42$

Fractions as operators

Find:

a) $\frac{2}{3}$ of 186

b) $\frac{5}{6}$ of $3\frac{1}{2}$

c) $\frac{13}{20}$ of 72 Kg

d) $\frac{3}{8}$ of £10.96

Recurring decimals and fractions

Write as a recurring decimal:

a) $\frac{1}{6} =$

b) $\frac{7}{99} =$

c) $\frac{2}{7} =$

Write as a fraction in its simplest terms:

e) $0.\dot{8} =$

f) $0.2\dot{7} =$

g) $0.\dot{0}6\dot{6} =$

Reverse percentages

The price of a computer including 20% VAT is £570. What was the price of the computer excluding VAT?

The population of an island is 15% lower than it was ten years ago. If the population is now 13600, what was the population ten years ago?