

Rationalise the Denominator

1) $\frac{1}{\sqrt{7}}$

2) $\frac{7}{3\sqrt{7}}$

Multiply and Divide Fractions

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

2) $\frac{4}{7} \div \frac{2}{5}$

Quick Wits

Higher 2

Nth Term Rule

What is the nth term rule of

1) 7, 11, 15, 19, ...

2) 1, 4, 9, 16, ...

Reverse Percentage

Kylie had a 10% pay rise.

She is now paid £330.

How much was she originally paid?

Algebraic Fractions and Equations

Solve $\frac{2x-3}{3} + \frac{x-1}{6} = 3$

Ratio

Salad dressing is made from oil and vinegar in the ratio 3:1.

- 1) How much oil is needed to make 100ml of salad dressing?
- 2) How much salad dressing can you make if you have plenty of oil but only 20ml of vinegar?



Rationalise the Denominator

$$1) \frac{1}{\sqrt{7}} \times \frac{\sqrt{7}}{\sqrt{7}} = \frac{\sqrt{7}}{7}$$

$$2) \frac{7}{3\sqrt{7}} \times \frac{\sqrt{7}}{\sqrt{7}} = \frac{7\sqrt{7}}{21} = \frac{\sqrt{7}}{3}$$

Multiply and Divide Fractions

$$1) \frac{3}{5} \times \frac{2}{3} = \frac{6}{15} = \frac{2}{5}$$

$$2) \frac{4}{7} \div \frac{2}{5} = \frac{4}{7} \times \frac{5}{2} = \frac{20}{14} = 1 \frac{6}{14} = 1 \frac{3}{7}$$



Quick Wits

Higher 2

Nth Term Rule

What is the nth term rule of

1) 7, 11, 15, 19, ...

$$4n + 3$$

2) 1, 4, 9, 16, ...

$$n^2$$

Reverse Percentage

Kylie had a 10% pay rise.

She is now paid £330.

How much was she originally paid?

$$110\% = 330$$

$$1\% = 3$$

$$100\% = \text{£}300$$

or

$$\frac{330}{1.1} = \text{£}300$$

Algebraic Fractions and Equations

$$\text{Solve } \frac{2x-3}{3} + \frac{x-1}{6} = 3$$
$$\frac{4x-6+x-1}{6} = 3$$

$$5x-7 = 18$$

$$5x = 25$$

$$x = 5$$

Ratio

Salad dressing is made from oil and vinegar in the ratio 3:1.

1) How much oil is needed to make 100ml of salad dressing?

$$100 \div 4 = 25$$

$$25 \times 3 = 75\text{ml}$$

2) How much salad dressing can you make if you have plenty of oil but only 20ml of vinegar?

$$20 \times 3 = 60\text{ml of oil}$$

$$60\text{ml} + 20\text{ml} = 80\text{ml of dressing.}$$