

Fractions		Knowledge Organiser
Key Vocabulary	Simplify Fractions	Compare and Order Fractions
numerator	<p>9 12</p> <p>Factors of 9: 1, 3, 9</p> <p>Factors of 12: 1, 2, 3, 4, 6, 12</p> <p>$\frac{9}{12} = \frac{3}{4}$</p>	Use the Common Denominator <p>Multiples of 5: 5, 10, 15</p> <p>Multiples of 3: 3, 6, 9, 12, 15</p> <p>$\frac{3}{5} = \frac{6}{15}$</p> <p>$\frac{2}{3} = \frac{4}{15}$</p> <p>$\frac{6}{15} > \frac{4}{15}$</p>
denominator		Use the Common Numerator <p>Multiples of 5: 5, 10, 15</p> <p>Multiples of 10: 10, 20</p> <p>$\frac{5}{8} = \frac{10}{16}$</p> <p>$\frac{10}{13} = \frac{20}{26}$</p> <p>$\frac{10}{16} < \frac{20}{26}$</p>
proper fraction		<p style="text-align: center;">Dividing Fractions by Whole Numbers</p> <p>$\frac{2}{5} \div 2 = \frac{1}{5}$</p> <p>Multiplication and division are the inverse of one another so: $\frac{2}{5} \times \frac{1}{2} = \frac{2}{10}$</p> <p>$\div 2$ is the same as $\times \frac{1}{2}$</p>
improper fraction		
factor		
highest common multiple		
lowest common multiple		
equivalents		
common numerator		
common denominator		
decimal equivalent		
simplify		
simplest form		
mixed number		
whole number		
mixed number		

Fractions		Knowledge Organiser
Adding and Subtracting Proper Fractions	Adding and Subtracting Mixed Numbers	
Same Denominators <p>$\frac{4}{7} + \frac{2}{7} = \frac{6}{7}$</p> <p>$\frac{8}{11} - \frac{3}{11} = \frac{5}{11}$</p>	Add or subtract the whole numbers and fractions separately. $2\frac{2}{5} + 1\frac{3}{10} = 3\frac{7}{10}$ $2 + 1 = 3$ $\frac{2}{5} + \frac{3}{10} = \frac{4}{10} + \frac{3}{10} = \frac{7}{10}$ $3 + \frac{7}{10} = 3\frac{7}{10}$	$2\frac{1}{2} - 1\frac{1}{4} = 1\frac{1}{4}$ $2 - 1 = 1$ $\frac{1}{2} - \frac{1}{4} = \frac{2}{4} - \frac{1}{4} = \frac{1}{4}$ $1 + \frac{1}{4} = 1\frac{1}{4}$
Different Denominators $\frac{2}{7} + \frac{3}{5} = \frac{10}{35} + \frac{14}{35} = \frac{24}{35}$ Multiples of 7: 7, 14, 21, 28, 35 Multiples of 5: 5, 10, 15, 20, 25, 30, 35 $\frac{2}{7} = \frac{10}{35}, \frac{3}{5} = \frac{14}{35}$ $\frac{10}{35} + \frac{14}{35} = \frac{24}{35}$	$\frac{9}{10} - \frac{1}{4} = \frac{18}{20} - \frac{5}{20} = \frac{13}{20}$ Multiples of 10: 10, 20 Multiples of 4: 4, 8, 12, 16, 20 $\frac{9}{10} = \frac{18}{20}, \frac{1}{4} = \frac{5}{20}$ $\frac{18}{20} - \frac{5}{20} = \frac{13}{20}$	Convert the mixed numbers to improper fractions. $2\frac{2}{5} + 1\frac{3}{10} = \frac{12}{5} + \frac{13}{10} = \frac{24}{10} + \frac{13}{10} = \frac{37}{10} = 3\frac{7}{10}$ $2\frac{2}{5} = \frac{12}{5}$ $1\frac{3}{10} = \frac{13}{10}$ $2\frac{1}{2} = \frac{5}{2}$ $1\frac{1}{4} = \frac{5}{4}$
Multiplying Proper Fractions Multiplying Fractions by Fractions $\frac{1}{2} \times \frac{1}{3} = \frac{1 \times 1}{2 \times 3} = \frac{1}{6}$	$5\frac{5}{4} - \frac{5}{4} = \frac{10}{4} - \frac{5}{4} = \frac{5}{4}$ $\frac{5}{2} - \frac{5}{4} = \frac{10}{4} - \frac{5}{4} = \frac{5}{4}$ $\frac{5}{4} = 1\frac{1}{4}$	Fractions of Amounts <p>120</p> <p>Find $\frac{3}{8}$ of 120: $\frac{1}{8}$ of 120 = $120 \div 8 = 15$ $\frac{3}{8}$ of 120 = $3 \times 15 = 45$</p>
Multiplying Fractions by Whole Numbers <p>$\frac{2}{5} \times 3 = \frac{6}{5} = 1\frac{1}{5}$</p>	<p>Find the whole: $\frac{4}{9}$ of the whole = 24 $\frac{1}{9}$ of the whole = $24 \div 4 = 6$ The whole is $9 \times 6 = 54$</p>	

