

Week 1

This week in a nutshell:

This half term commences with a revisit of some previously seen material. Question 2 looks at a concept that is pervasive and helpful throughout a student's mathematical development. We see the introduction of ratio and some questions to start building the necessary skills that will arise this year and beyond.

Question 1: Arithmetic with decimals and fractions

Question 2: Understanding multiplication

Question 3: Simplifying ratio

Question 4: Writing ratio

Question 5: Column methods

This week's ideas for class discussion include:

Question 1: **Arithmetic with decimals and fractions**

- **How is arithmetic with decimals or fractions different to arithmetic with integers?**

Question 2: **Understanding multiplication**

- **Why might it be useful to represent the same calculation in different ways?**

Question 3: **Simplifying ratio**

- **Are smaller numbers always easier to work with?**

Question 4: **Writing ratio**

- **Why does the order a ratio is written matter?**

Question 5: **Column methods**

- **How has your confidence with column methods changed throughout the year?**

Week 1: Day 1

1) **Evaluate:**

a) $0.24 + 0.18 =$

b) $\frac{1}{2} \times \frac{1}{4} =$

2) **Write as a single product:**

$$3 + 3 + 3 + 3 + 3$$

3) **Write the ratio in its simplest form:**

$$10 : 2$$

4) **Write the ratio of red circles to blue circles.**



5) **Perform the calculation below.**

$$\begin{array}{r}
 3 \ 2 \ 0 \\
 2 \ 5 \ 4 \\
 + \ 1 \ 1 \ 7 \\
 \hline
 \\
 \hline
 \end{array}$$

Week 1: Day 1 Answers

1) Evaluate:

a) $0.24 + 0.18 = 0.42$

b) $\frac{1}{2} \times \frac{1}{4} = \frac{1}{8}$

2) Write as a single product:

$3 + 3 + 3 + 3 + 3$ 5×3

3) Write the ratio in its simplest form:

$10 : 2$ $5 : 1$

4) Write the ratio of red circles to blue circles. $3 : 2$



5) Perform the calculation below.

$$\begin{array}{r}
 3 \quad 2 \quad 0 \\
 2 \quad 5 \quad 4 \\
 + \quad 1 \quad 1 \quad 7 \\
 \hline
 6 \quad 9 \quad 1 \\
 \hline
 \end{array}$$

Week 1: Day 2

1) Evaluate:

a) $2.25 - 1.57 =$

b) $\frac{5}{8} - \frac{1}{4} =$

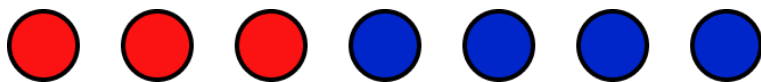
2) Write as a single product:

$$a + a + a + a + a$$

3) Write the ratio in its simplest form:

$$4 : 20$$

4) Write the ratio of blue circles to red circles.



5) Perform the calculation below.

$$\begin{array}{r} 5 \quad 5 \quad 2 \\ - \quad 1 \quad 4 \quad 3 \\ \hline \\ \hline \end{array}$$

Week 1: Day 2 Answers

1) Evaluate:

a) $2.25 - 1.57 = 0.68$

b) $\frac{5}{8} - \frac{1}{4} = \frac{3}{8}$

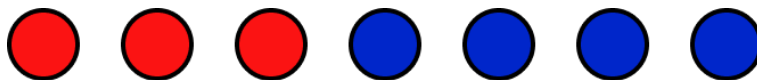
2) Write as a single product:

$a + a + a + a + a$ $5a$

3) Write the ratio in its simplest form:

$4 : 20$ $1 : 5$

4) Write the ratio of blue circles to red circles. $4 : 3$



5) Perform the calculation below.

$$\begin{array}{r}
 5 \quad 5 \quad 2 \\
 - \quad 1 \quad 4 \quad 3 \\
 \hline
 4 \quad 0 \quad 9 \\
 \hline
 \end{array}$$

Week 1: Day 3

1) **Evaluate:**

a) $1.2 \times 0.8 =$

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

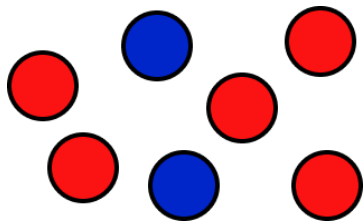
2) **Write as a single product:**

$$4 + 4 + 4$$

3) **Write the ratio in its simplest form:**

$$18 : 8$$

4) **Write the ratio of red circles to blue circles.**



5) **Perform the calculation below.**

$$\begin{array}{r} 2 \quad 8 \quad 6 \\ 1 \quad 7 \quad 4 \\ + \quad 9 \quad 8 \\ \hline \\ \hline \end{array}$$

Week 1: Day 3 Answers

1) Evaluate:

a) $1.2 \times 0.8 = 0.96$

b) $\frac{5}{6} - \frac{1}{5} = \frac{19}{30}$

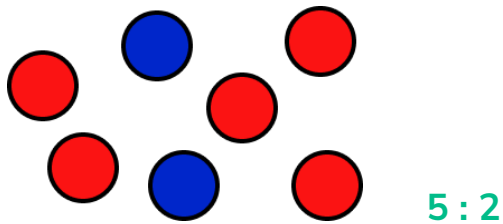
2) Write as a single product:

$$4 + 4 + 4 \quad 3 \times 4$$

3) Write the ratio in its simplest form:

$$18 : 8 \quad 9 : 4$$

4) Write the ratio of red circles to blue circles.



5) Perform the calculation below.

$$\begin{array}{r} 2 \quad 8 \quad 6 \\ 1 \quad 7 \quad 4 \\ + \quad \quad 9 \quad 8 \\ \hline 5 \quad 5 \quad 8 \end{array}$$

Week 1: Day 4

1) **Evaluate:**

a) $0.11 \div 0.2 =$

b) $\frac{2}{3} + \frac{1}{4} - \frac{1}{5} =$

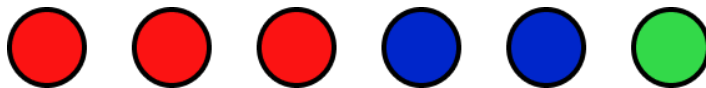
2) **Write as a single product:**

$$2 + 2 + 2 + 2 + 2 + 2 + 2$$

3) **Write the ratio in its simplest form:**

$$3 : 9 : 27$$

4) **Write the ratio of red circles to blue circles to green circles.**



5) **Perform the calculation below.**

$$\begin{array}{r} 4 \quad . \quad 9 \\ 1 \quad . \quad 2 \\ + \quad 0 \quad . \quad 7 \\ \hline \\ \hline \end{array}$$

Week 1: Day 4 Answers

1) Evaluate:

a) $0.11 \div 0.2 = 0.55$

b) $\frac{2}{3} + \frac{1}{4} - \frac{1}{5} = \frac{43}{60}$

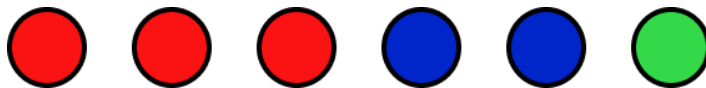
2) Write as a single product:

$$2 + 2 + 2 + 2 + 2 + 2 + 2 \quad 7 \times 2$$

3) Write the ratio in its simplest form:

$$3 : 9 : 27 \quad 1 : 3 : 9$$

4) Write the ratio of red circles to blue circles to green circles. $3 : 2 : 1$



5) Perform the calculation below.

$$\begin{array}{r}
 4 \quad . \quad 9 \\
 1 \quad . \quad 2 \\
 + \quad 0 \quad . \quad 7 \\
 \hline
 6 \quad . \quad 8 \\
 \hline
 \end{array}$$

Week 1: Day 5

1) Evaluate:

a) $0.35 \div 0.07 =$

b) $\frac{3}{8} \times \frac{2}{3} \div \frac{1}{5} =$

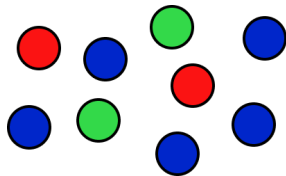
2) Write as the product of an integer using index notation:

$$7 + 7 + 7 + 7 + 7 + 7 + 7$$

3) Write the ratio in its simplest form:

$$35 : 21 : 14$$

4) Write the ratio of red circles to blue circles to green circles.



5) Perform the calculation below.

$$\begin{array}{r}
 8 \quad . \quad 2 \quad 9 \\
 5 \quad . \quad 0 \quad 4 \\
 + \quad 1 \quad . \quad 8 \quad 5 \\
 \hline
 \\
 \hline
 \end{array}$$

Week 1: Day 5 Answers

1) Evaluate:

a) $0.35 \div 0.07 = 5$

b) $\frac{3}{8} \times \frac{2}{3} \div \frac{1}{5} = \frac{5}{4}$

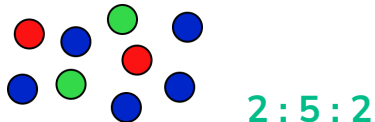
2) Write as the product of an integer using index notation:

$$7 + 7 + 7 + 7 + 7 + 7 + 7 \quad 7^2$$

3) Write the ratio in its simplest form:

$$35 : 21 : 14 \quad 5 : 3 : 2$$

4) Write the ratio of red circles to blue circles to green circles.



5) Perform the calculation below.

$$\begin{array}{r}
 8 \quad . \quad 2 \quad 9 \\
 5 \quad . \quad 0 \quad 4 \\
 + \quad 1 \quad . \quad 8 \quad 5 \\
 \hline
 1 \quad 5 \quad . \quad 1 \quad 8
 \end{array}$$

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