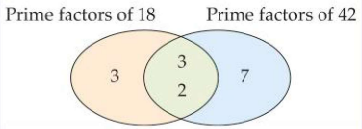
1 MySummary

Check out

You should now be able to ...

Test it ➡ **Questions**

✓ Round numbers to a given number of significant figures.	7	1, 2
✓ Use rounding to make estimates.	7	3
✓ Find the upper and lower bounds of a calculation or measurement.	7	4 – 8
✓ Use prime factors to find the HCF and LCM of pairs of numbers.	7	9 – 11

Language	Meaning	Example
Significant figures (sf)	The first non-zero figures in a number.	The first two significant figures in 456.7 are 4 (400) and 5 (50).
Rounding	Expressing a number to a given degree of accuracy.	456.7 rounded to 2 sf is 460
Estimate	Use rounding to estimate the answers to calculations.	$\frac{3.14 + 2.1}{1.9} \approx \frac{3 + 2}{2} \approx \frac{5}{2} \approx 2.5$
Upper and lower bounds	The maximum and minimum values that a rounded number or measurement can be.	time = 12.4 s (3 sf) upper bound 12.45 s lower bound 12.35 s or 12.35 s ≤ time < 12.45 s
Prime factors	Prime numbers that are also factors.	$700 = 2^2 \times 5^2 \times 7$
HCF (Highest common factor)	The highest number that is a factor of two or more numbers.	The HCF of 24 and 40 is 8.
LCM (Lowest common multiple)	The lowest number that is a multiple of two or more numbers.	The LCM of 24 and 40 is 120.
Venn diagrams	Overlapping circles used to find HCF and LCM.	

1 MyReview

1 Round 3.0754 to
a 1 sf **b** 2 sf **c** 3 sf

2 Round 0.03597 to
a 1 sf **b** 2 sf **c** 3 sf

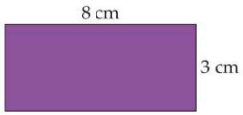
3 Estimate the answer to each of these calculations.
a $\frac{62 + 57.1}{18.9}$ **b** $\frac{1.9 \times 18.4}{0.77}$
c $7.6 + 12.5 \times 84$ **d** $\frac{41.3 + 6.07}{9.8 - 8.9}$

4 The following measurements were made to the nearest centimetre. Identify the upper and lower bounds of each.
a 1 cm **b** 1.5 m
c 30 mm **d** 250 mm

5 The following measurements were made to the nearest millimetre. Identify the upper and lower bounds of each.
a 100 mm **b** 8 m
c 11 cm **d** 1 mm

6 The build cost of an Olympic stadium was £490 million to 2 significant figures. What are the upper and lower bounds of this figure? Use inequality signs in your answer.

7



The measurements of this rectangle are correct to the nearest mm. Calculate
a the upper bound of the area
b the lower bound of the perimeter.

8 A cheetah runs 100 metres (nearest m) in 3.9 s (1 dp). Calculate
a the lower bound of its speed
b the upper bound of its speed.
Give your answers in m/s to 3 sf.

9 Write each of these numbers as the product of its prime factors.
a 84 **b** 126
c 693 **d** 1430

10 Find the HCF and LCM of these pairs of numbers.
a 25 and 35 **b** 66 and 234
c 420 and 315 **d** 1680 and 900

11 Evaluate the following, leaving your answer as a fraction in its simplest form.
a $\frac{13}{60} + \frac{11}{105}$ **b** $\frac{17}{60} - \frac{19}{84}$

What next?

Score	
0 – 4	Your knowledge of this topic is still developing. To improve look at Formative test: 3C-1; MyMaths: 1005, 1006, 1034, 1043, 1044, and 1067
5 – 9	You are gaining a secure knowledge of this topic. To improve look at InvisiPen: 112, 135, 172, 174 and 183
10 – 11	You have mastered this topic. Well done, you are ready to progress!