Estimate answers to calculations

1 There are 195 people on a train.

There are 308 people on a plane.

a) Complete the sentences to estimate the total number of people.

195 is close to [ ]   308 is close to [ ]

My estimate for the number of people in total is

[ ] + [ ] = [ ]

b) Work out the total number of people on the train and plane.

[ ]

Was it a good estimate? How do you know?

2 Estimate the answer to 395 + 49

395 is close to [ ]   49 is close to [ ]

My estimate is [ ]

Work out the exact answer.

How close was your estimate? Talk to a partner.

3 For each question work out an estimate and the exact answer.

Question	Estimate	Exact answer
705 − 194		
511 − 97		
187 + 203 + 19		

4 Why is it a good idea to estimate the answer to a calculation? Write one reason.

_____

_____

_____

5 Amir is working out 195 + 412

		H	T	O
		1	9	5
+		4	1	2
	5	1	0	7

Use an estimate to show how you know Amir is wrong.

_____

_____

6 Mr Jones cycles some kilometres each day.

The table shows the distance he cycles.

Monday	Tuesday	Wednesday	Thursday
189 km	88 km	215 km	53 km

Mr Jones planned to cycle 500 km in total by the end of Thursday.

a) Has Mr Jones cycled as many kilometres as he planned?
   Give an estimate.

b) How far has Mr Jones cycled in total?

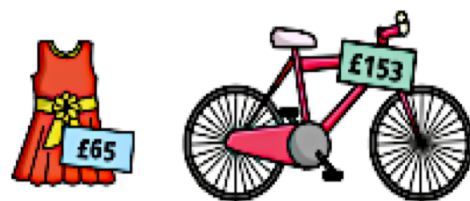**7** A bottle is full of 813 ml of orange juice.

A glass has a capacity of 495 ml.

Can you pour two full glasses of juice? Give an estimate.

Explain your answer.

813 ml

_____

_____

8 Whitney is estimating if she has saved enough money to buy a new dress and a new bike.

£65   £153

Whitney has so far saved £220

I have not saved enough. £65 is close to £100 and £153 is close to £200. That means I need about £300

Is Whitney correct? _____

Explain your answer.

_____

_____

Optional Extension Work!

Tommy

I estimate 143 − 95 will be 50 because I will subtract 100 from 150

Is this a good estimate? Why?

Are there any other ways he could have estimated?

1 There are 195 people on a train.

There are 308 people on a plane.

a) Complete the sentences to estimate the total number of people.

195 is close to | 200 | 308 is close to | 300 |

My estimate for the number of people in total is

| 200 | + | 300 | = | 500 |

b) Work out the total number of people on the train and plane.

| 503 |

Was it a good estimate? How do you know?

2 Estimate the answer to 395 + 49

395 is close to | 400 | 49 is close to | 50 |

My estimate is | 450 |

Work out the exact answer.

How close was your estimate? Talk to a partner.

3 For each question work out an estimate and the exact answer.

Question	Estimate	Exact answer
705 – 194	700 - 200 = 500	511
511 – 97	500 - 100 = 400	414
187 + 203 + 19	200 + 200 + 20 = 420	409

4 Why is it a good idea to estimate the answer to a calculation? Write one reason.

To check if the answer makes sense / is approximately correct.

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5 Amir is working out 195 + 412

		H	T	O	
		1	9	5	
+		4	1	2	
	5	1	0	7	

Use an estimate to show how you know Amir is wrong.

200 + 400 = 600

Amir's answer is too big.

6 Mr Jones cycles some kilometres each day.

The table shows the distance he cycles.

Monday	Tuesday	Wednesday	Thursday
189 km	88 km	215 km	53 km

Mr Jones planned to cycle 500 km in total by the end of Thursday.

a) Has Mr Jones cycled as many kilometres as he planned?
   Give an estimate.

200 + 100 + 200 + 50 = 550   Yes

b) How far has Mr Jones cycled in total?

545 km

7 A bottle is full of 813 ml of orange juice.

A glass has a capacity of 495 ml.

Can you pour two full glasses of juice? Give an estimate.

Explain your answer.

No   500ml + 500ml = 1,000ml

813ml < 1,000ml

8 Whitney is estimating if she has saved enough money to buy a new dress and a new bike.

£153

£65

Whitney has so far saved £220

I have not saved enough. £65 is close to £100 and £153 is close to £200. That means I need about £300

Is Whitney correct? No

Explain your answer.

£153 is closer to £150 and £65 is close to £70

£150 + £70 = £220   so she has saved enough

Optional Extension Work!

Tommy

> I estimate 143 − 95 will be 50 because I will subtract 100 from 150

Is this a good estimate? Why?

Are there any other ways he could have estimated?

Yes, because he found two numbers close to the original numbers.

He could have rounded to the nearest 10 and calculated.

140 − 100 (= 40)