

Adding & Subtracting Decimals

Column method

$$23.36 + 11.472 = 34.832$$

	2	3	•	3	6	0
+	1	1	•	4	7	2
	3	4	•	8	3	2
			1			

$$28.433 - 15.26 = 13.173$$

	2	8	•	³ 4	¹ 3	3
-	1	5	•	2	6	0
	1	3	•	1	7	3

1. Use the column method to work out the answers to these calculations.

a) $17.349 + 2.225 =$

			•			
+			•			
			•			

b) $28.34 - 15.531 =$

			•			
-			•			
			•			



Adding & Subtracting Decimals

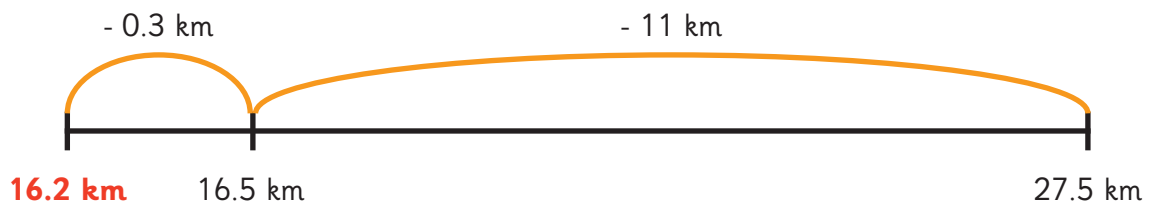
Number line method



$$18 \text{ cm} + 6.65 \text{ cm} = 24.65 \text{ cm}$$



$$27.5 \text{ km} - 11.3 \text{ km} = 16.2 \text{ km}$$



2. Use the number line method to work out the answer to each calculation.

a) $23 \text{ cm} + 9.54 \text{ cm} =$

b) $18.7 \text{ km} - 9.3 \text{ km} =$

Adding & Subtracting Decimals

3. Use a mental method or an informal method with jottings to calculate the answer to each question.

a) $7.65 \text{ kg} - 4.5 \text{ kg} =$

b) $9.372 \text{ m} + 8.526 \text{ m} =$

4. On Sunday, Craig swam 25.42 m. On Monday, he swam 24.66 m.

- a) Work out how far he swam in total using each of the 3 methods below.



Number line



Column method

			•		
+			•		
			•		

Mental method with jottings

- b) Which of the three methods did you think was the most efficient for this calculation?

.....

- c) Explain your reasoning.

.....

.....

Adding & Subtracting Decimals

5. Hussein has £25. He wants to buy a book that costs £7.65. He has worked out how much change he will receive using the column method. His working out is shown below.

	1	13	1	1	
	2	4	0	0	
-		7	6	5	
	1	6	4	5	

- a) What mistake has Hussein made?

.....

.....

.....

.....

- b) Carry out the calculation correctly using the method you think will be most efficient.

6. For each of the calculations below, decide which method you think would be the most efficient. Then, solve each one using your chosen methods. Once you have finished, compare your methods with a partner and discuss the reasons for your choices.

a) $18 - 5.35$

b) $23.034 + 12.387$

c) $6.95 - 4.55$

d) $4.7 + 29.8$



Adding & Subtracting Decimals

Answers

Column method

$$23.36 + 11.472 = 34.832$$

	2	3	•	3	6	0
+	1	1	•	4	7	2
	3	4	•	8	3	2
				1		

$$28.433 - 15.26 = 13.173$$

	2	8	•	³ 4	¹ 3	3
-	1	5	•	2	6	0
	1	3	•	1	7	3

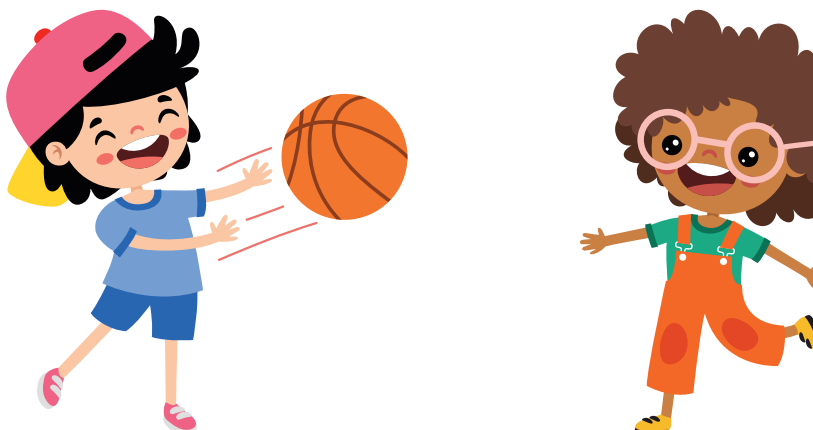
1. Use the column method to work out the answers to these calculations.

a) $17.349 + 2.225 = 19.574$

	1	7	•	3	4	9
+		2	•	2	2	5
	1	9	•	5	7	4
					1	

b) $28.34 - 15.531 = 12.809$

	2	⁷ 8	•	¹ 3	³ 4	¹ 0
-	1	5	•	5	3	1
	1	2	•	8	0	9



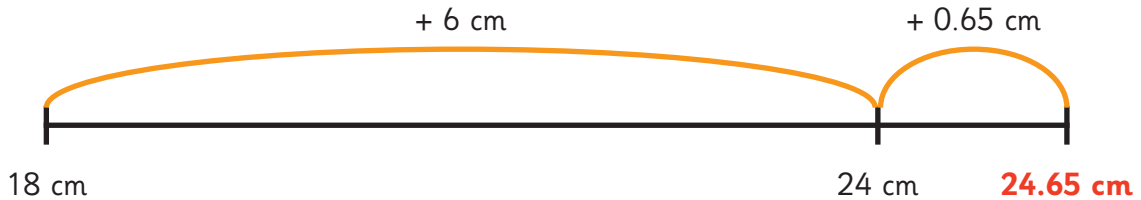
Adding & Subtracting Decimals

Answers

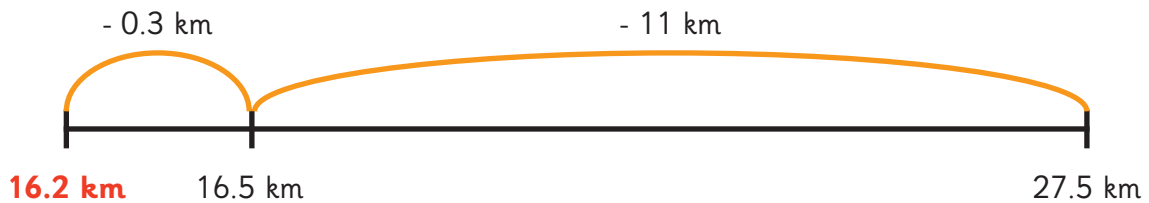
Number line method



$$18 \text{ cm} + 6.65 \text{ cm} = 24.65 \text{ cm}$$

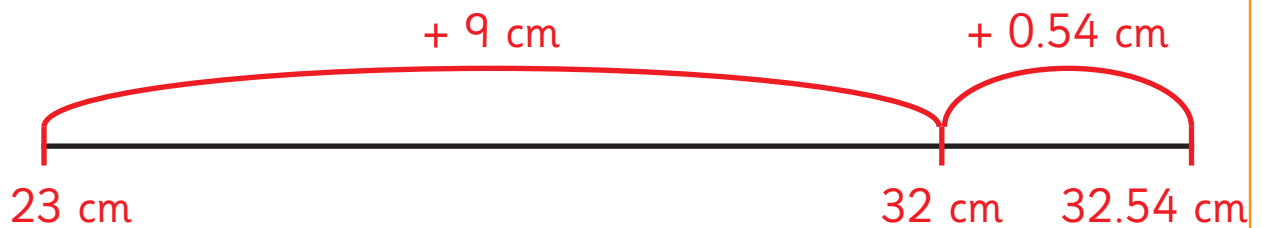


$$27.5 \text{ km} - 11.3 \text{ km} = 16.2 \text{ km}$$

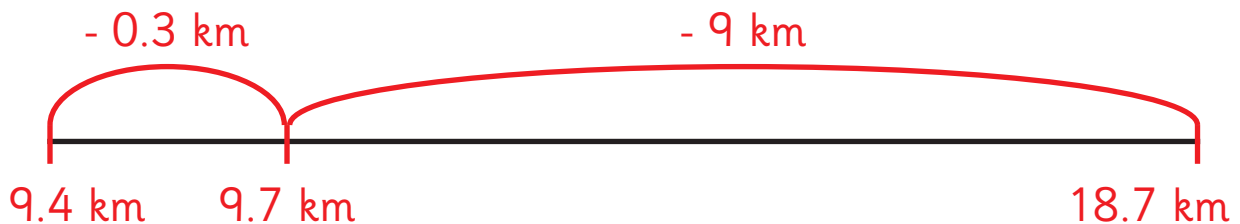


2. Use the number line method to work out the answer to each calculation.

a) $23 \text{ cm} + 9.54 \text{ cm} = 32.54 \text{ cm}$



b) $18.7 \text{ km} - 9.3 \text{ km} = 9.4 \text{ km}$



Adding & Subtracting Decimals

Answers

3. Use a mental method or an informal method to arrive at the answer to each question.

Pupils may have used alternative mental methods to arrive at their answers.

a) $7.65 \text{ kg} - 4.5 \text{ kg} =$

$$765 - 450 = 315$$

So, $7.65 - 4.5 = 3.15 \text{ kg}$

b) $9.372 \text{ m} + 8.526 \text{ m} = 9 + 8 = 17$

$$0.3 + 0.5 = 0.8$$

$$0.07 + 0.02 = 0.09$$

$$0.002 + 0.006 = 0.008$$

So $9.372 + 8.526 = 17.898 \text{ m}$

4. On Sunday, Craig swam 25.42 m. On Monday, he swam 24.66 m.

- a) Work out how far he swam in total using each of the 3 methods below.



Number line

Column method

	2	5	•	4	2	
+	2	4	•	6	6	
	5	0	•	0	8	
	1	1				

Mental method with jottings

Mental methods will vary.

50.08 m

- b) Which of the three methods did you think was the most efficient for this calculation?

Answers will vary.

- c) Explain your reasoning.

Answers will vary.

Adding & Subtracting Decimals

Answers

5. Hussein has £25. He wants to buy a book that costs £7.65. He has worked out how much change he will receive using the column method. His working out is shown below.

	1	13	1	1	
	2	4	0	0	
-		7	6	5	
	1	6	4	5	

- a) What mistake has Hussein made?

E.g. Hussein has exchanged a one from the ones column for ten hundredths.

- b) Carry out the calculation correctly using the method you think will be most efficient.

Methods will vary — the correct answer is £17.35.

6. For each of the calculations below, decide which method you think would be the most efficient. Then, solve each one using your chosen methods. Once you have finished, compare your methods with a partner and discuss the reasons for your choices.

Methods will vary.

a) $18 - 5.35 = 12.65$

b) $23.034 + 12.387 = 35.421$

c) $6.95 - 4.55 = 2.4$

d) $4.7 + 29.8 = 34.5$

