GCSE (9–1) MATHEMATICS

Topic Check In - 1.04 Inverse operations

Fill in the missing values.

1. $471 - 97 = 471 + \boxed{} - 100 = \boxed{}$

2. $34 \times 12 = \boxed{} \times 6 = \boxed{} \times 3 = \boxed{}$

Use the fact that 140 × 4 = 560 to determine the following.

3. $560 \div 4$

4. $560 \div 8$

5. Hamish thinks of a number. If he halves it and then halves it again the answer is 20. What was the original number?

6. Ruth is thinking of a number. If she multiplies it by 5 and then adds 3 the answer will be 58. Describe how you could work out what number she is thinking of.

7. What are the missing digits in the following calculation? $3\boxed{} \times \boxed{} = \boxed{}70$

8. Given that $32^2 = 1024$, find $7 + \sqrt{1024}$.

9. Amy and Brian play football. If Amy scored 4 more goals than Brian and they scored 22 goals in total, find the number of goals scored by Amy.

10. It costs £10 to hire a bicycle plus £2 for every hour. If it cost Darren £18 to hire a bike, how many hours did he hire it for?

Extension

How many different ways can you find to use four different single digit numbers, and any mathematical operations [+, –, ×, ÷ and brackets ( )] to make the answer 14?

Answers

1. 471 + 3 − 100 = 374

2. 68 × 6 = 136 × 3 = 408

3. 140

4. 70

5. 80

6. You need to subtract 3 from 58 and then divide by 5

7. 34 × 5 = 170

8. 39 [note ⁻25 is also a correct answer]

9. 13

10. 4

Extension

Possible examples: 1 × 2 + 3 × 4
4 × 2 + 5 + 1
1 × 2 × (3 + 4)

We'd like to know your view on the resources we produce. By clicking on the 'Like' or 'Dislike' button you can help us to ensure that our resources work for you. When the email template pops up please add additional comments if you wish and then just click 'Send'. Thank you.

OCR
Oxford Cambridge and RSA

Assessment Objective	Qu.	Topic	R	A	G
AO1	1	Use mental methods of subtraction			
AO1	2	Use mental methods of multiplication			
AO1	3	Know that multiplication and division are opposite functions			
AO1	4	Apply associated number facts			
AO1	5	Use inverse function to solve a problem			
AO2	6	Deduce solution by applying inverse functions			
AO2	7	Use properties of multiples and factors to construct chains of reasoning to solve a problem			
AO2	8	Draw a conclusion from mathematical information			
AO3	9	Solve a word problem using opposite operations			
AO3	10	Use BIDMAS rules in the correct opposite order to find a solution			

Assessment Objective	Qu.	Topic	R	A	G
AO1	1	Use mental methods of subtraction			
AO1	2	Use mental methods of multiplication			
AO1	3	Know that multiplication and division are opposite functions			
AO1	4	Apply associated number facts			
AO1	5	Use inverse function to solve a problem			
AO2	6	Deduce solution by applying inverse functions			
AO2	7	Use properties of multiples and factors to construct chains of reasoning to solve a problem			
AO2	8	Draw a conclusion from mathematical information			
AO3	9	Solve a word problem using opposite operations			
AO3	10	Use BIDMAS rules in the correct opposite order to find a solution			

Assessment Objective	Qu.	Topic	R	A	G
AO1	1	Use mental methods of subtraction			
AO1	2	Use mental methods of multiplication			
AO1	3	Know that multiplication and division are opposite functions			
AO1	4	Apply associated number facts			
AO1	5	Use inverse function to solve a problem			
AO2	6	Deduce solution by applying inverse functions			
AO2	7	Use properties of multiples and factors to construct chains of reasoning to solve a problem			
AO2	8	Draw a conclusion from mathematical information			
AO3	9	Solve a word problem using opposite operations			
AO3	10	Use BIDMAS rules in the correct opposite order to find a solution			

Assessment Objective	Qu.	Topic	R	A	G
AO1	1	Use mental methods of subtraction			
AO1	2	Use mental methods of multiplication			
AO1	3	Know that multiplication and division are opposite functions			
AO1	4	Apply associated number facts			
AO1	5	Use inverse function to solve a problem			
AO2	6	Deduce solution by applying inverse functions			
AO2	7	Use properties of multiples and factors to construct chains of reasoning to solve a problem			
AO2	8	Draw a conclusion from mathematical information			
AO3	9	Solve a word problem using opposite operations			
AO3	10	Use BIDMAS rules in the correct opposite order to find a solution			