

## Higher Check In - 1.01 Calculations with integers

**Do not use a calculator.**

Calculate the following.










1.  $22 - 52$
2.  $-10 + 7 + 11 - 5$
3.  $45\,035 \div 5$
4.  $\frac{-13 + 5}{2 \times 8}$
5.  $\frac{-2 \times -80}{-4 \times 4}$
6. A company employs 5 cleaners who each work 6 hours per day. The company pays the cleaners £240 in total each day. Show that the cleaners earn £8 per hour.
7. A hotel charges £180 for two people for two nights. Muna wants to book the same hotel for six people for three nights. Based on the same rates, she thinks it will cost less than £700. Is she correct? Explain your answer.
8. Alice is in Spain where the temperature is  $86^{\circ}\text{F}$ . She wants to convert this temperature into  $^{\circ}\text{C}$ . She has been told to first of all subtract 32, then divide by 9 and then multiply by 5. Show that  $86^{\circ}\text{F}$  converts to  $30^{\circ}\text{C}$ .
9. Ellie drives 252 miles. She drives 120 miles on the M6 motorway and the rest on ordinary roads. She completes the journey in 5 hours. If she drives at an average speed of 60 mph on the motorway, calculate the average speed on the ordinary roads.
10. In a football league, teams get 3 points for a win and 1 point for a draw. Hayhill FC have played ten games and have a total of 22 points. If they have only won or drawn, calculate the number of games that they have won and the number of games that they have drawn.

**Extension**

Each shape in the 3×3 grid represents a number.

The totals outside the grid are the sum of each row or column.

Find the number each shape represents and work out the missing totals.

			<b>= 8</b>
			<b>=</b>
			<b>= 12</b>
<b>=</b>	<b>= 3</b>	<b>=</b>	

# GCSE (9–1)










# MATHEMATICS

## Answers

1. -30
2. 3
3. 9007
4.  $-8 \div 16 = -0.5$
5.  $160 \div -16 = -10$
6. 5 people  $\times$  6 hours = 30 hours per day in total,  $\pounds 240 \div 30$  hours =  $\pounds 8$  per hour
7.  $\pounds 180 \div 2 = \pounds 90$  (cost for two people for one night),  $90 \times 3 = \pounds 270$  (cost for six people for 1 night),  $\pounds 270 \times 3 = \pounds 810$  (cost for six people for three nights).  
Muna is not correct as it will cost more than  $\pounds 700$  ( $\pounds 810$ ).
8.  $86 - 32 = 54$ ,  $54 \div 9 = 6$ ,  $6 \times 5 = 30^\circ\text{C}$
9. M6 motorway: 120 mph at a speed of 60 mph will take 2 hours ( $120 \div 60 = 2$ )  
 $252 - 120 = 132$  miles on ordinary roads in 3 hours ( $5 - 2$ )  
Ordinary roads: Speed = distance  $\div$  time =  $132 \div 3 = 44$  mph
10. 6 games won and 4 games drawn ( $6 \times 3 + 4 \times 1 = 18 + 4 = 22$ )

## Extension

Square = 7  
Circle = -2  
Triangle = 3

			= 8
			= 17
			= 12
= 21	= 3	= 13	

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Assessment Objective	Qu.	Topic	R	A	G
AO1	1	Subtract integers			
AO1	2	Add and subtract integers			
AO1	3	Divide integers			
AO1	4	Add, multiply and divide integers			
AO1	5	Multiply and divide integers			
AO2	6	Calculate with positive integers			
AO2	7	Explain how to calculate the quotient and product of integers			
AO2	8	Correctly perform a set of integer calculations given in word form involving subtraction, division and multiplication			
AO3	9	Solve a problem using division, multiplication and subtraction of integers			
AO3	10	Solve a problem involving calculations with integers			

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