

Assessment Task: Cycling

For full marks in this assessment you will need to:

- Show all the calculations you need to do
- Show how you have checked your calculations
- If you make a choice, say why you have made that choice

In this assessment you can use a calculator



Assessment Task: Cycling

Part A (24 marks)

You have decided to take up cycling and need to get a new bike and accessories. Choose one of the bikes from the resource sheet.

1. Write down the name of the bike you have chosen and the 'Buy it now' cost.

(1 mark)

2. How much would your chosen bike cost in total if you pay monthly?

(3 marks)

You decide to 'Buy it now'

3. What is the difference between the 'Buy it now' cost and the 'paying monthly' cost? You must show your working.

(2 marks)

You will also need some cycling accessories.

4. Choose 4 accessories from the resource sheet. One of them must be a helmet. Write down the 4 accessories you have chosen and the cost of each.

(2 marks)

5. How much will your chosen bike and accessories cost in total? You must show your working.

(2 marks)

You must pay half the cost of the bike and accessories when you order them.

6. How much will you pay when you order the bike and accessories? Show your working.

(2 marks)

You order the bike today.

7. Write down today's date and the date when the bike will be delivered.

(3 marks)

You decide to go on a biking holiday with some friends.

They give you a map of the journey showing the places you will stay on each night.

8. How many kilometres will you ride in total?

(2 marks)

On day 1 you start out from Tipford Lodge at 10:15 in the morning.

You ride at exactly 10 kilometres an hour and have a break for half an hour.

9. What time do you arrive at Wellington Castle?
Show the steps you use to get your answer.

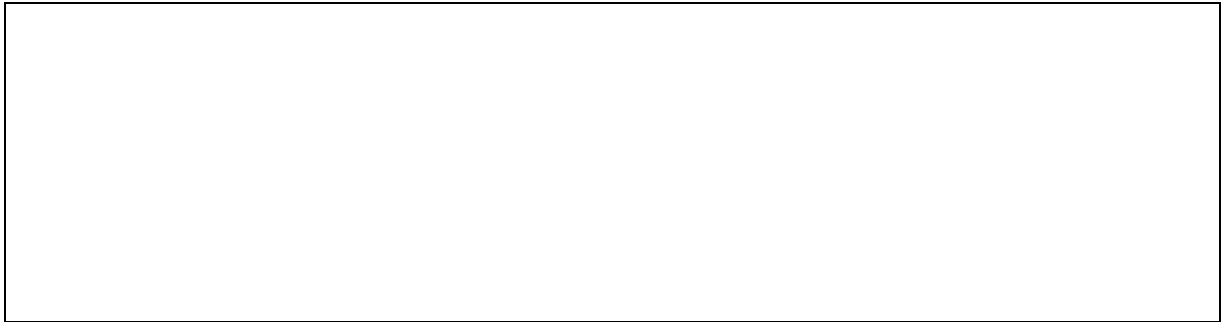
(4 marks)

The ride from Temple Beach to Brendon Park is all uphill.

You decide to have 3 rest stops.

These will be when you have covered a quarter, half and three quarters of the total distance.

10. At what distance from Temple Beach will each stop be?



(3 marks)

Part B (8 marks)

During the holiday your tyres got six punctures.
Each puncture took 20 minutes to repair.

11. How many **hours** were spent repairing punctures?

(2 marks)

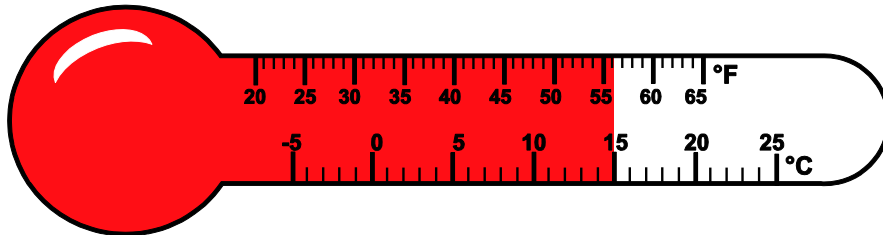
To repair a puncture you need to remove the tyre.
The tyre goes around the outside of the wheel.



12. What is the name given to the outside edge of any 2D shape?

(1 mark)

At ten o'clock on day 1 you check the temperature on a thermometer.
The temperature is shown on the thermometer below.



At 2 o'clock the temperature has risen by 11°C

13. What is the temperature in °C at 2 o'clock?

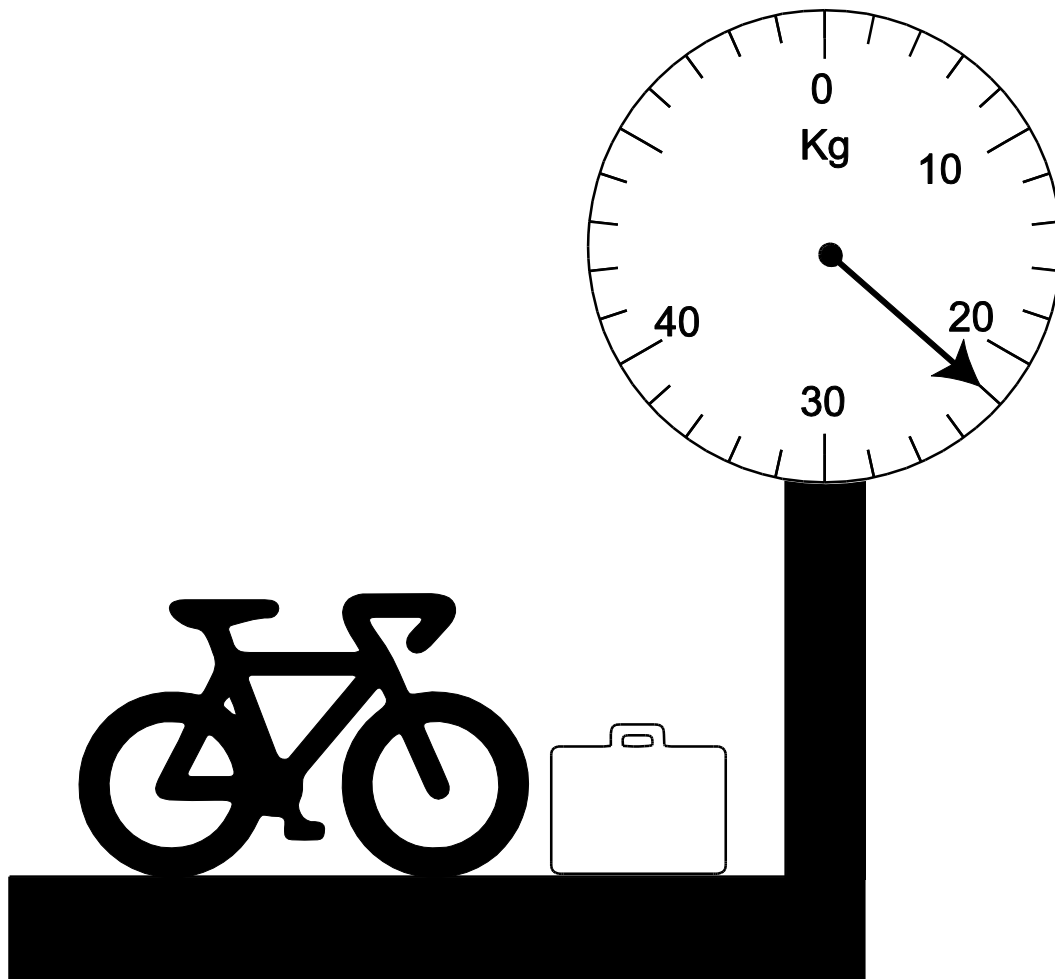
(2 marks)

The water bottles on your bike have a capacity of 500 ml.
One day you buy a 2 litre container of water.

14. How many 500 ml water bottles can you fill with the 2 litre container of water?

(2 marks)

You weigh your bike and luggage on some weighing scales.



15. What is the weight of the bike and the luggage?

(1 mark)

Cycling accessories

		
<p>Sports Helmet £40</p>	<p>Power Pump £22</p>	<p>Lock £8</p>
		
<p>Lightweight Pump £8</p>	<p>Lightweight Helmet £18</p>	<p>Bag with repair kit £14</p>
		
<p>Comfort shorts £16</p>	<p>Knee pads £34</p>	<p>Water bottle £18</p>
		
<p>Front and rear lights £22</p>	<p>Super safe Helmet £50</p>	<p>Super lock £16</p>

Bikes



Shark 6000 Road Bike

A Road Bike is the best for urban roads or country lanes. Speed is everything.

Buy it now for £420

Or

10 monthly payments of £48

Delivery time 4 weeks



Falcon V Classic Bike

Classic Bikes are traditional and easy to ride.

Buy it now for £380

Or

10 monthly payments of £43

Delivery time 5 weeks



Tekon Multi Hybrid Bike

Hybrid Bikes are the perfect mix between Mountain and Road Bikes.

Buy it now for £498

Or

10 monthly payments of £55

Delivery time 6 weeks



Lava Extreme Mountain bike

A Mountain Bike is what you want if you're looking to ride off road.

Buy it now for £458

Or

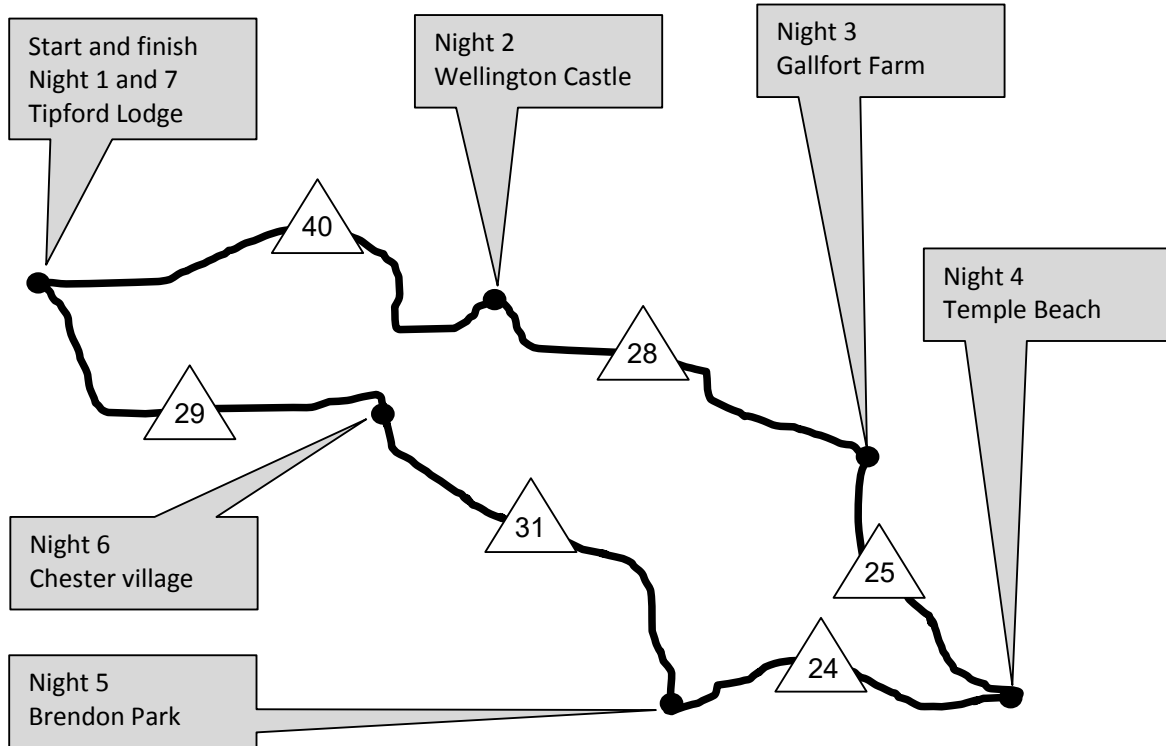
10 monthly payments of £51

Delivery time 3 weeks

Map of holiday route

 = distance between stops in kilometres

● = overnight stop



2018 Calendar

January							
Wk	Mo	Tu	We	Th	Fr	Sa	Su
1	1	2	3	4	5	6	7
2	8	9	10	11	12	13	14
3	15	16	17	18	19	20	21
4	22	23	24	25	26	27	28
5	29	30	31				

February							
Wk	Mo	Tu	We	Th	Fr	Sa	Su
5				1	2	3	4
6	5	6	7	8	9	10	11
7	12	13	14	15	16	17	18
8	19	20	21	22	23	24	25
9	26	27	28				

March							
Wk	Mo	Tu	We	Th	Fr	Sa	Su
9				1	12	3	4
10	5	6	7	8	9	10	11
11	12	13	14	15	16	17	18
12	19	20	21	22	23	24	25
13	26	27	28	29	30	31	

April							
Wk	Mo	Tu	We	Th	Fr	Sa	Su
13							1
14	2	3	4	5	6	7	8
15	9	10	11	12	13	14	15
16	16	17	18	19	20	21	22
17	23	24	25	26	27	28	29
18	30						

May							
Wk	Mo	Tu	We	Th	Fr	Sa	Su
18		1	2	3	4	5	6
19	7	8	9	10	11	12	13
20	14	15	16	17	18	19	20
21	21	22	23	24	25	26	27
22	28	29	30	31			

June							
Wk	Mo	Tu	We	Th	Fr	Sa	Su
22					1	2	3
23	4	5	6	7	8	9	10
24	11	12	13	14	15	16	17
25	18	19	20	21	22	23	24
26	25	26	27	28	29	30	

July							
Wk	Mo	Tu	We	Th	Fr	Sa	Su
26							1
27	2	3	4	5	6	7	8
28	9	10	11	12	13	14	15
29	16	17	18	19	20	21	22
30	23	24	25	26	27	28	29
31	30	31					

August							
Wk	Mo	Tu	We	Th	Fr	Sa	Su
31			1	2	3	4	5
32	6	7	8	9	10	11	12
33	13	14	15	16	17	18	19
34	20	21	22	23	24	25	26
35	27	28	29	30	31		

September							
Wk	Mo	Tu	We	Th	Fr	Sa	Su
35						1	2
36	3	4	5	6	7	8	9
37	10	11	12	13	14	15	16
38	17	18	19	20	21	22	23
39	24	25	26	27	28	29	30

October							
Wk	Mo	Tu	We	Th	Fr	Sa	Su
40	1	2	3	4	5	6	7
41	8	9	10	11	12	13	14
42	15	16	17	18	19	20	21
43	22	23	24	25	26	27	28
44	29	30	31				

November							
Wk	Mo	Tu	We	Th	Fr	Sa	Su
44				1	2	3	4
45	5	6	7	8	9	10	11
46	12	13	14	15	16	17	18
47	19	20	21	22	23	24	25
48	26	27	28	29	30		

December							
Wk	Mo	Tu	We	Th	Fr	Sa	Su
48	31					1	2
49	3	4	5	6	7	8	9
50	10	11	12	13	14	15	16
51	17	18	19	20	21	22	23
52	24	25	26	27	28	29	30

2019 Calendar

January							
Wk	Mo	Tu	We	Th	Fr	Sa	Su
1		1	2	3	4	5	6
2	7	8	9	10	11	12	13
3	14	15	16	17	18	19	20
4	21	22	23	24	25	26	27
5	28	29	30	31			

February							
Wk	Mo	Tu	We	Th	Fr	Sa	Su
5					1	2	3
6	4	5	6	7	8	9	10
7	11	12	13	14	15	16	17
8	18	19	20	21	22	23	24
9	25	26	27	28			

March							
Wk	Mo	Tu	We	Th	Fr	Sa	Su
9					1	2	3
10	4	5	6	7	8	9	10
11	11	12	13	14	15	16	17
12	18	19	20	21	22	23	24
13	25	26	27	28	29	30	31

April							
Wk	Mo	Tu	We	Th	Fr	Sa	Su
14	1	2	3	4	5	6	7
15	8	9	10	11	12	13	14
16	15	16	17	18	19	20	21
17	22	23	24	25	26	27	28
18	29	30					

May							
Wk	Mo	Tu	We	Th	Fr	Sa	Su
18			1	2	3	4	5
19	6	7	8	9	10	11	12
20	13	14	15	16	17	18	19
21	20	21	22	23	24	25	26
22	27	28	29	30	31		

June							
Wk	Mo	Tu	We	Th	Fr	Sa	Su
22						1	2
23	3	4	5	6	7	8	9
24	10	11	12	13	14	15	16
25	17	18	19	20	21	22	23
26	24	25	26	27	28	29	30

July							
Wk	Mo	Tu	We	Th	Fr	Sa	Su
27	1	2	3	4	5	6	7
28	8	9	10	11	12	13	14
29	15	16	17	18	19	20	21
30	22	23	24	25	26	27	28
31	29	30	31				

August							
Wk	Mo	Tu	We	Th	Fr	Sa	Su
31				1	2	3	4
32	5	6	7	8	9	10	11
33	12	13	14	15	16	17	18
34	19	20	21	22	23	24	25
35	26	27	28	29	30	31	

September							
Wk	Mo	Tu	We	Th	Fr	Sa	Su
35							1
36	2	3	4	5	6	7	8
37	9	10	11	12	13	14	15
38	16	17	18	19	20	21	22
39	23	24	25	26	27	28	29
40	30						

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40		1	2	3	4	5	6
41	7	8	9	10	11	12	13
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44					1	2	3
45	4	5	6	7	8	9	10
46	11	12	13	14	15	16	17
47	18	19	20	21	22	23	24
48	25	26	27	28	29	30	

December							
Wk	Mo	Tu	We	Th	Fr	Sa	Su
48	30	31					1
49	2	3	4	5	6	7	8
50	9	10	11	12	13	14	15
51	16	17	18	19	20	21	22
52	23	24	25	26	27	28	29

2020 Calendar

January							
Wk	Mo	Tu	We	Th	Fr	Sa	Su
1			1	2	3	4	5
2	6	7	8	9	10	11	12
3	13	14	15	16	17	18	19
4	20	21	22	23	24	25	26
5	27	28	29	30	31		

February							
Wk	Mo	Tu	We	Th	Fr	Sa	Su
5						1	2
6	3	4	5	6	7	8	9
7	10	11	12	13	14	15	16
8	17	18	19	20	21	22	23
9	24	25	26	27	28	29	

March							
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9							1
10	2	3	4	5	6	7	8
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12	16	17	18	19	20	21	22
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14			1	2	3	4	5
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21	18	19	20	21	22	23	24
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36	31						

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52	21	22	23	24	25	26	27
53	28	29	30	31			

OCR MATHS FUNCTIONAL SKILLS – MARK SCHEME ENTRY LEVEL 3 – CYCLING

Series	Practice Paper 2	Level	Entry Level 3
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Mark scheme analysis			
Skill area	Assessment weighting	Marks out of	Actual Marks
Representing	30%-40%	11	
Analysing	30%-40%	11	
Interpreting	30%-40%	10	
Total		32	

Question		Award Maximum	on evidence of ...	Skills standard	Coverage and range
1	Bike and "Buy it now" cost	1	1: bike identified with correct buy it now cost	R	f, k
2	Cost of bike paying monthly	3	1: correct monthly payment identified for their bike 1: multiplied by 10 (months) 1: correct answer with correct monetary notation (assume correct working if correct answer seen) Do not penalise incorrect monetary notation from this point onwards.	R	a, b, h, k
3	Difference by paying in full	2	1: correct method for subtraction of costs (must be seen) 1: their correct answer (allow follow through from Q1 and 2)	R	a, f, h, k
4	Choose 4 accessories with prices	2	1: 4 items chosen including a helmet 1: correct prices for their chosen accessories	R	f, k
5	Calculate total cost of bike and accessories	2	1: their bike cost and their accessories added (must be seen) 1: correct answer	A	a, f, h

Question		Award Maximum	on evidence of ...	Skills standard	Coverage and range
6	Calculate half to pay as deposit	2	1: method for halving (must be seen) 1: correct answer	A	a, b, d
7	Find delivery date	3	1: today's date written using a correct format 1: correct delivery time identified for their bike 1: correct delivery date using their delivery time and correct date format Note: Ensure candidates have the correct choice of calendar resource sheet.	R	a, h
8	Identify distance travelled	2	1: correct distances extracted from map (40+28+25+24+31+29) 1: correct addition of their distances (allow follow through)	I	a, j, k
9	Calculate arrival time at Wellington Castle	4	1: correctly identifies distance to travel as 40 (km) 1: correctly calculating 4 hours 1: adding on 30 minutes for break 1: counting on to 14:45 or equivalent oe with their time (assume correct method if this seen)	A	a, e, h
10	Calculate each distance	3	1: 6 km 1: 12 km 1: 18 km	A	a, e, h
11	Hours spent repairing punctures	2	1: method seen to calculate total minutes 1: their minutes converted to hours (if 2 hours seen assume method correct)	I	a, h
12	Identifying outside edge	1	1: perimeter (do not penalise incorrect spelling)	I	i
13	Identify temperature	2	1: correctly extracting 15°C off thermometer 1: counting on 11 to get to 26°C)	I	e

Question		Award Maximum	on evidence of ...	Skills standard	Coverage and range
14	Identify number of bottles that can be filled	2	1: 2000 ÷ 500 or counting up in 500s 1: correct answer of 4 (if seen assume correct method)	I	a, e
15	Identify weight of bike	1	1: 22 (kg)	I	e, g, k
		Total 32			

Question	Skill standard			coverage										
	R	A	I	a	b	c	d	e	f	g	h	i	j	k
1	1								✓					✓
2	3			✓	✓						✓			✓
3	2			✓					✓		✓			✓
4	2								✓					✓
5		2		✓					✓		✓			
6		2		✓	✓		✓							
7	3			✓							✓			
8			2	✓									✓	✓
9		4		✓				✓		✓				
10		3		✓				✓		✓				
11			2	✓							✓			
12			1									✓		
13			2					✓						
14			2	✓				✓						
15			1					✓	✓					✓
	11	11	10											