# Maths Extension White Rose

## Q1

Dexter is measuring a box of chocolates with a ruler that measures in centimetres and millimetres.

He measures it to the nearest cm and writes the answer 28 cm.
What is the smallest length the box of chocolates could be?

## Q2

Whitney is thinking of a number.

Rounded to the nearest whole her number is 4
Rounded to the nearest tenth her number is 3.8
Write down at least 4 different numbers that she could be thinking of.

# Maths Extension Testbase

**Q1.**

Dev thinks of a **whole** number.

He multiplies it by 4

He rounds his answer to the nearest 10

The result is 50

Write **all** the possible numbers that Dev could have started with.

_____

2 marks

**Q2.**

Annie swims on average 0.87 km in 30 minutes.
If she continues at the same speed, how far will she swim in 2 hours, rounded to one decimal place?

Circle your answer.

3.2 km  3.3 km  3.4 km  3.5 km  3.6 km

1 mark

**Q3.**

Complete this table by rounding the numbers to the **nearest hundred**.

| | Rounded to the **nearest hundred** |
|---|---|
| 20,906 | |
| 2,090.6 | |
| 209.06 | |

2 marks

**Q4.**

Estimate the answer to this calculation.

4,803.91 – 1,595.07

Circle the correct estimate.

3,600 3,500 3,400

3,300 3,200

1 mark

**Q5.**

Jack is rounding to the nearest **hundred thousand**.
Write the **smallest** whole number that he can round to 3,400,000

1 mark

Grace is rounding to the nearest **hundred thousand**.
Write the **largest** whole number that he can round to 3,400,000

1 mark

**Q6.**

The table shows the total attendance figures for 3 baseball stadiums.
Round each number to the nearest ten thousand

| Stadium | Total attendance | Total attendance, rounded to nearest ten thousand |
|---|---|---|
| Dodger Stadium | 3,703,312 | |
| Angel Stadium | 3,016,142 | |
| Fenway Park | 2,955,434 | |

2 marks

## Q7.

Complete the table.

| Number | Rounded to nearest 1000 | Rounded to nearest 100,000 |
|---|---|---|
| 385,704 | | 400,000 |
| 809,601 | | |

2 marks

## Q8.

A newspaper reported,

*'**6 million** people (to the nearest million) watched a football match on television.'*

What is the smallest number of people that could have watched the football match on television?

1 mark

## Q9.

Round **124,531**

to the nearest 10,000

to the nearest 1,000

to the nearest 100

2 marks

## Q10.

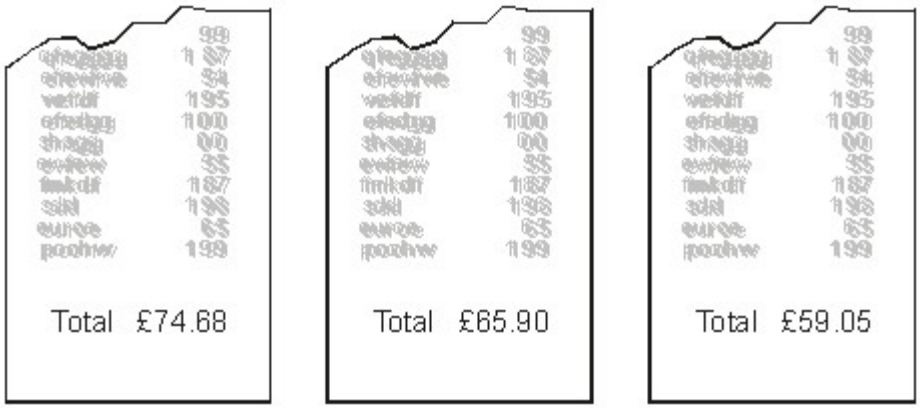
Circle the number **closest** in value to **0.1**

**0.01** **0.05** **0.11** **0.2** **0.9**

1 mark

## Q11.

Here are three supermarket bills.




Tom rounds each bill **to the nearest £10** and then adds them up.

What is the total amount that Tom gets?

£

1 mark

Mary adds up the three bills **exactly**.

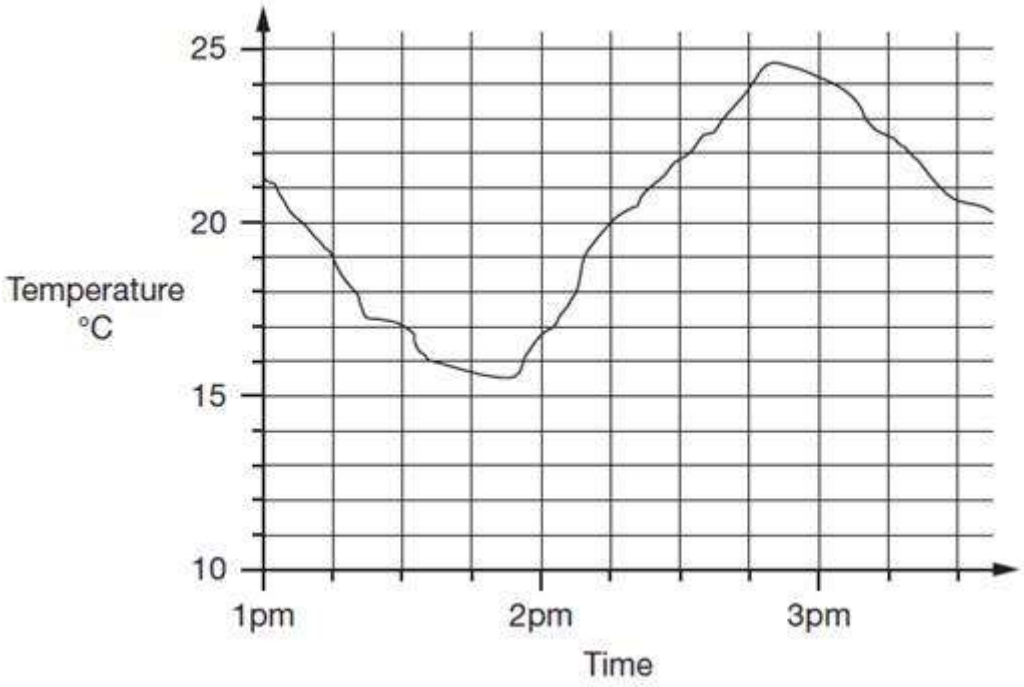
What is the total difference between her total and Tom's total?

Show your method

2 marks

## Q12.

This graph shows how the temperature changed in Liam's room one afternoon.




Estimate the temperature at 3:15pm.

°C

1 mark

Estimate the time when the temperature was highest.

pm

1 mark

How much did the temperature change from 2pm to 2:30pm? Give your answer to the **nearest degree**.

degrees

## Q13.

The **difference** between two numbers is 2

When each number is rounded to the nearest hundred, the difference between them is 100

Write what the two numbers could be. and

Mark schemes for Testbase

## Q1.

Award **TWO** marks for 12 **AND** 13
If the answer is incorrect, award **ONE** mark for:
- only one correct number and no incorrect number

**OR**
- 12 **AND** 13 **AND** not more than one incorrect number.

*Accept for **ONE** mark an answer of 48 **AND** 52 **AND** no more than one incorrect number.*

**Up to 2m**

**[2]**

## Q2.

3.5 km

**[1]**

## Q3.

Award **TWO** marks for three boxes completed correctly as shown:

| | Rounded to the **nearest hundred** |
|---|---|
| 20,906 | 20,900 |
| 2,090.6 | 2,100 |
| 209.06 | 200 |

If the answer is incorrect, award **ONE** mark for two boxes correct.

**Up to 2m**

**[2]**

## Q4.

3,200

**[1]**

## Q5.

3,350,000

*Accept an answer written in words.*

**1**

3,449,999

*Accept an answer written in words.*

**1**

**[2]**

## Q6.

Award **TWO** marks for three correct numbers, as shown.

| **Stadium** | **Total attendance** | **Total attendance, rounded to nearest ten thousand** |
|---|---|---|
| Dodger Stadium | 3,703,312 | 3,700,000 |
| Angel Stadium | 3,016,142 | 3,020,000 |
| Fenway Park | 2,955,434 | 2,960,000 |

Award **ONE** mark for any two correct numbers.

**[2]**

## Q7.

All three numbers correct or any two correct

| Number | Rounded to nearest 1000 | Rounded to nearest 100 000 |
|---|---|---|
| 385 704 | 386 000 | 400 000 |
| 809 601 | 810 000 | 800 000 |

**2**

***or***

Any two correct

**1**

**[2]**

## Q8.

5,500,000

*Accept an answer written in words e.g. 5.5 million.*

**[1]**

## Q9.

Award **TWO** marks for all three numbers correctly rounded:
120,000
125,000
124,500
If the answer is incorrect, award **ONE** mark for any two numbers correctly rounded.

**Up to 2**

**[2]**

## Q10.

0.01 0.05 0.11 0.2 0.9

*Accept unambiguous alternatives, eg the number crossed or underlined.*

**[1]**

## Q11.

(a) £200

**1**

(b) Award **TWO** marks for the correct answer of 37p **OR** £0.37
**OR**
for finding the correct difference between £199.63 and the answer given for 13a

*Answer to (a) must be a multiple of £10 for the award of* ***TWO*** *follow-through marks.*

If the answer is incorrect, award **ONE** mark for evidence of appropriate method, eg
74.68 + 65.90 + 59.05 = 199.63
200 – 199.63
**OR**
for evidence of an appropriate method to find the correct difference between £199.63 and the answer given for (a).

*Answer need not be obtained for the award of* ***ONE*** *mark.*
*Accept for* ***ONE*** *mark £37p* ***OR*** *0.37p* ***OR*** *£37 as evidence of appropriate method.*

**Up to 2**

**[3]**

## Q12.

(a) Accept answers in the range 22.2 to 22.8 exclusive.

***Do not*** *accept 22.2 or 22.8*

**1**

(b) Accept answers in the range 2:48pm to 2:52pm inclusive.

*The answer is a specific time.*

**1**

(c) 5

1

[3]

## Q13.

Two numbers with a difference of 2, in the range 48 **inclusive** to 52 **exclusive** eg:

- 48 **AND** 50

**OR**

- 51.9 **AND** 49.9

**OR**

any pair of numbers that differ from those above by a multiple of 100 and have a difference of 2, eg:

- 149 **AND** 151

**OR**

- 648 **AND** 650

*Numbers can be given in either order.*

U1

[1]