testbase

Week 12

Time and Ratio

Name: _____

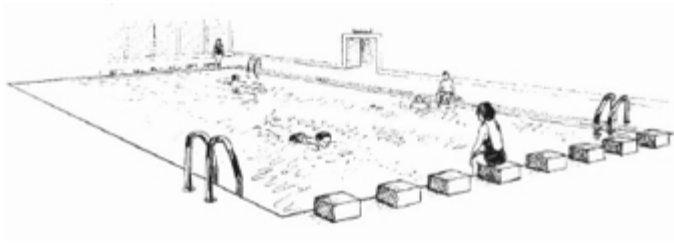Class: _____

Date: _____

Time: **30 minutes**

Marks: **30 marks**

Comments:

1

One length of a swimming pool is **25 metres**.

How many **lengths** are there in a **150 metre** race?

1 mark

Six children swim a 50 metre race.

Lane	Name	Time in seconds
1	Bryn	92.4
2	Craig	86.3
3	Fiona	90.4
4	Harun	85.1
5	Jody	84.7
6	Dean	89.2

Who finished **first**?

1 mark

How many seconds faster was **Dean** than **Fiona**?

seconds

1 mark

2 Tom, Amy and Helen want to go on a boat trip.

There are three boats.

Lark	Heron	Kestrel
50 minute trip	70 minute trip	90 minute trip
Tickets £2.75 each	Tickets £3.50 each	Tickets £4.20 each

How much does it cost altogether for **three** people to go on the **Lark**?

£

1 mark

Tom and Amy go on the **Heron**.

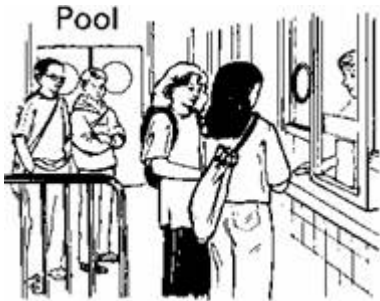They leave at **2:15pm**.

At what **time** do they return?

pm

1 mark

Helen goes on the **Kestrel** and **gets back at 4:15pm**.

At what **time** did the boat leave?

	pm

1 mark

3

These are the opening times at a swimming pool.

	opening times		
	am		pm
Monday		Pool closed	
Tuesday			
Wednesday	10.30	to	5.30
Thursday	10.30	to	8.30
Friday	10.30	to	9.00
Saturday	8.00	to	6.00
Sunday	7.00	to	4.00

How many **hours** is the pool open on a **Sunday?**

	hours

1 mark

Which **day** has the **latest** closing time?

1 mark

Habib arrives at the pool at **5:20pm** on **Saturday.**

How many **minutes** is it before the pool closes?

minutes

1 mark

4

The Fun Day started at this time in the morning.

It finished at this time in the afternoon.

How long did the Fun Day last?

hours	minutes

1 mark

5

Boat Hire	
Motor boats	**Rowing boats**
£1.50 for 15 minutes	£2.50 for 1 hour

How much does it cost to hire a **rowing boat** for three hours?

£

1 mark

Sasha pays **£3.00** to hire a **motor boat**.

She goes out at **3:20pm**.

By what time must she **return**?

pm

1 mark

6

Liam hires a bike.

He has to return it by 3 pm.

The time is 2:25 pm.

How many minutes has he got left?

minutes

1 mark

Amy hires a bike for 45 minutes.

She takes the bike out at 3:30 pm.

At what time must she return the bike?

pm

1 mark

7

Here are the **start** and **finish** times of some children doing a sponsored walk.

	Start time	Finish time
Claire	9.30	10.55
Ruth	9.35	11.05
Dan	9.40	11.08
Tim	9.45	11.05

How much longer did Claire take than Tim?

	minutes

1 mark

8 Put these times in order, starting with the shortest.

100 seconds

20 seconds

5 minutes

1 minute

shortest

1 mark

9 Seb has to see the doctor at 10:05 am.

He gets to the doctor's surgery at 9:52 am.

How many minutes **early** is he?

minutes

1 mark

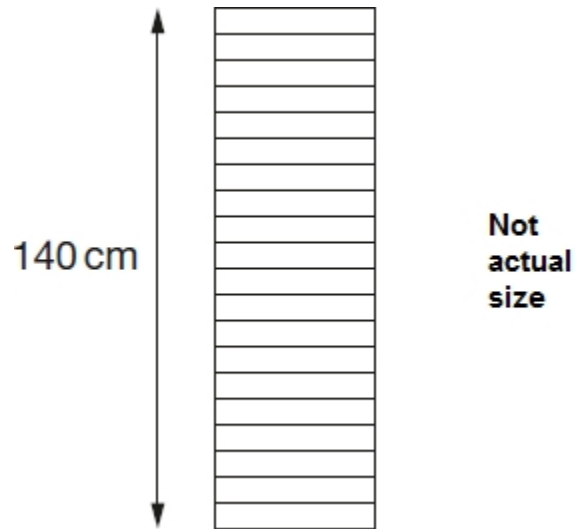He leaves the doctor's surgery at 10:25 am.

He gets to school 45 minutes later.

What time does he arrive at school?

am

1 mark

10 A stack of 20 identical boxes is 140 cm tall.

140 cm

Not
actual
size

Stefan takes **three** boxes off the top.
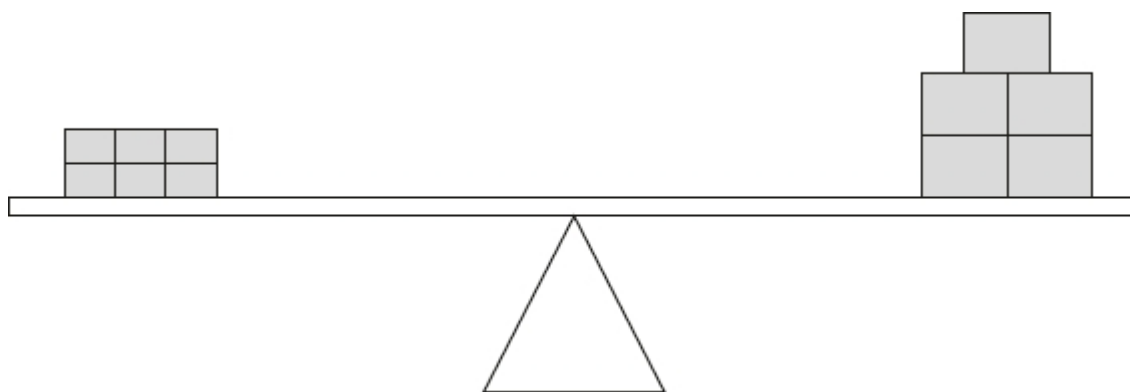
How tall is the stack now?

Show
your
method

cm

2 marks

11

6 small bricks have the same mass as 5 large bricks.

The mass of one small brick is 2.5 kg.

What is the mass of one large brick?

Show your method

| | kg |

2 marks

12

Peanuts cost **60p** for **100 grams**.

What is the cost of **350 grams** of peanuts?

Show your method

2 mark

Raisins cost **80p** for **100 grams**.

Jack pays **£2** for a bag of raisins.

How many **grams of raisins** does he get?

Show your method

g

2 mark

13 Here are the ingredients for chocolate ice cream.

cream	400 ml
milk	500 ml
egg yolks	4
chocolate	120 g
sugar	100 g

Stefan has only 300 ml of cream to make chocolate ice cream.

How much **chocolate** should he use?

Show your method

g

2 marks

14

Shortcrust pastry is made using flour, margarine and lard.

The **flour, margarine** and **lard** are mixed in the ratio

    8 : 3 : 2 by weight.

How many grams of **margarine** and **lard** are needed to mix with **200 grams** of flour?

Show your method

| margarine | g | lard | g |

2 mark

Mark schemes

1   (a)   6

       1

      (b)   Jody   *Accept 84.7 **OR** Lane 5 **OR** 5.*

       1

      (c)   1.2

       1

       [3]

2   (a)   £8.25

                    *Accept £8.25p **OR** £8.25 **OR** £8.25p*
                    ***Do not** accept £825p **OR** £825*

       1

      (b)   3:25

                    *Accept 3.25 **OR** 3-25 **OR** 3 25 **OR** 325*
                    ***OR** twenty-five past three **OR** 15:25*

       1

      (c)   2:45

                    *Accept 2.45 **OR** 2-45 **OR** 2 45 **OR** 245*
                    ***OR** quarter to three **OR** 14:45*

       1

       [3]

3   (a)   9

       1

      (b)   Friday

                    Accept recognisable mis-spellings.
                    Accept 9.00 circled.

       1

      (c)   40

       1

       [3]

4

| 4 hours | 30 minutes |

                       Accept $4\frac{1}{2}$ hours if the minutes space is left blank

                       OR *270 minutes if the hours space is left blank.*

         [1]

5   (a)   £7.50

                       Accept £7.50p **OR** *£7 50*

                       Do not *accept £7.5* **OR** *£750p* **OR** *£750*

         1

  (b)   3:50 pm

                       Accept '10 to 4' or equivalent.

                       Accept 15:50 **OR** *350* **OR** *1550*

         1

         [2]

6   (a)   35

                       The answer is a time interval.

         1

  (b)   4:15

                       The answer is a specific time.

         1

         [2]

7   5

         [1]

8 Times written in correct order as shown:

| 20 sec | 1 min | 100 sec | 5 min |

> ***Do not*** *accept times written in reverse order.*
> *Accept answers with missing or incorrect units.*

[1]

9 13

> *The answer is a time interval*

1

11:10

> *The answer is a specific time*

1

[2]

10 Award **TWO** marks for the correct answer of 119.

If the answer is incorrect, award **ONE** mark for evidence of an appropriate method, e.g.

- $140 \div 20 = 7$
  $3 \times 7 = 21$
  $140 - 21$

OR

- $140 \div 20 = 7$
  $20 - 3 = 17$
  17×7

> *Answer need not be obtained for the award of* ***ONE*** *mark.*

Up to 2m

[2]

11

Award **TWO** marks for the correct answer of 3.

If the answer is incorrect, award **ONE** mark for evidence of an appropriate method, e.g.

- 2.5 × 6 = 15
  15 ÷ 5

Answer need not be obtained for the award of ONE mark.

*Misreads are **not** allowed.*

Up to 2m

[2]

12 (a) Award **TWO** marks for the correct answer of £2.10 **OR** 210p

If the answer is incorrect, award **ONE** mark for evidence of appropriate working, eg

350 ÷ 100 = 3.5

3.5 × 60 = wrong answer

*Accept for **TWO** marks £2.10p **OR** 210 **OR** 2.10*

*Accept for **ONE** mark £2.1 **OR** £210 **OR** 2.10p as evidence of appropriate working.*

*Calculation must be performed for the award of **ONE** mark.*

Up to 2

(b) Award **TWO** marks for the correct answer of 250

If the answer is incorrect, award **ONE** mark for evidence of appropriate working, eg

200 ÷ 80 = 2.5

100 × 2.5 = wrong answer.

*Calculation must be performed for the award of **ONE** mark.*

Up to 2

[4]

13 Award **TWO** marks for the correct answer of 90g.

If the answer is incorrect, award **ONE** mark for evidence of an appropriate method, e.g:

- $300 \div 400 = \dfrac{3}{4}$

  $\dfrac{3}{4} \times 120$

  *Answer need not be obtained for the award of **ONE** mark.*

  Up to 2

  [2]

14 Award **TWO** marks for the correct answer of

margarine   75g

lard   50g

If the answer is incorrect, award **ONE** mark for evidence of an appropriate method, eg

200 ÷ 8 = 25
margarine = 3 × 25
lard = 2 × 25

OR the use of ratio, eg

8 : 3 : 2
80 : 30 : 20
40 : 15 : 10
200 : wrong answer : 50
200 : 75 : wrong answer

Up to 2

[2]