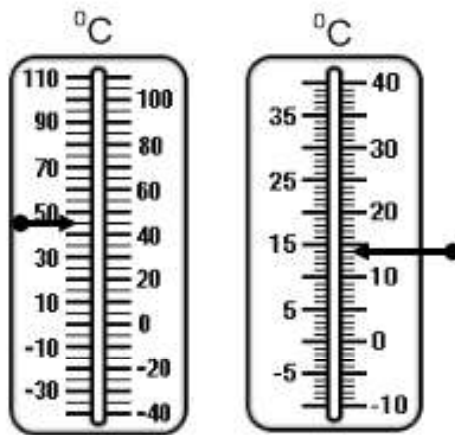## National 5 Numeracy (National 5)

Practice Assessment 3

1. An antique clock is worth £850. If the value of this is expected to increase by 7.5% each year, what will the clock be worth after 10 years?
   Give your answer correct to **2 significant figures**

2. In a class survey, $\frac{5}{11}$ of the class said they travel to school by bus, $\frac{1}{3}$ said they came by car. The rest of the class said they walked to school. What fraction of the class walked to school?

3. The probability of choosing a chocolate biscuit from a box of assorted biscuits is 0.35.
   In a box containing 40 biscuits there were 18 chocolate ones. Is this more or less than expected?   (**Justify your answer by calculation.)**

4. What are the temperatures on these thermometers?

5. The chart below shows how fit you are based on how long it takes you to walk one mile

(minutes and seconds per mile)										
Age(years)	18 – 30		30-40		40 – 50		50 – 60		60 +	
Fitness Rating	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
Excellent	18:30	19:00	19:30	20:45	21:00	22:30	22:30	24:15	24:00	26:00
Good	20:00	21:00	21:30	23:00	23:15	24:45	25:00	26:30	26:30	26:30
Average	23:00	24:00	24:00	26:15	26:45	26:15	26:45	30:30	30:30	32:30
Below Average	26:00	27:00	28:15	29:30	30:30	32:00	32:45	34:30	36:00	37:00
Poor	30:00+	32:00+	30:00+	35:15+	36:00+	38:30+	39:00+	41:45+	42:00+	45:00+

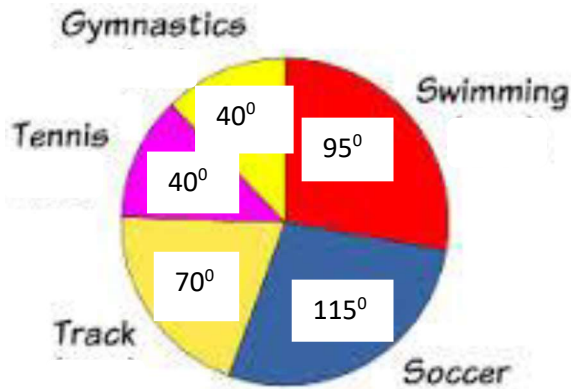**Explain what the chart tells us about**

a) Callum who is 46 yrs old and took 26 mins 45 secs to walk a mile
b) Emma who is 33 yrs old and took 37 mins 15 secs to walk a mile

6. a) An estate was shared between three brothers Tom, Richard and Harry in the ratio

3: 1 : 5. If Richard's share was £2400, how much did Tom and Harry each receive?
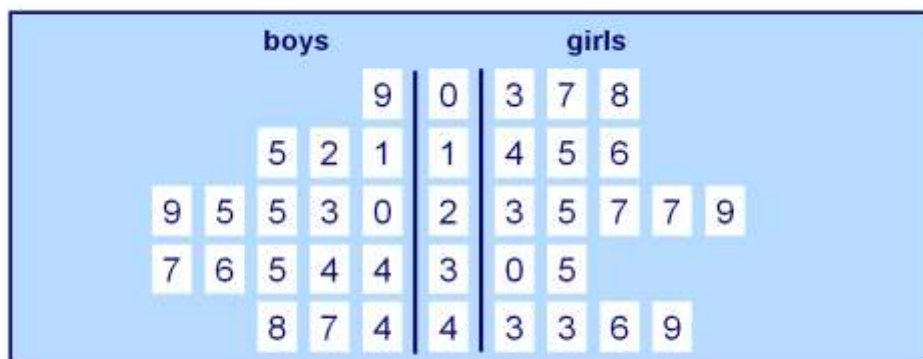
b) Three friends, Jodie, Sophie and Lorna found a treasure chest containing 216 gold coins and decide to share them in the ration 3 : 4 : 5. How many coins would each girl receive?

7.

S1 – 4 pupils were asked what their favourite sport was and the results are shown in the pie chart. If 350 pupils' favourite sport was track events, how many said their favourite was swimming?

8. The back to back stem and leaf diagram shows the marks of boys and girls in a maths class test.
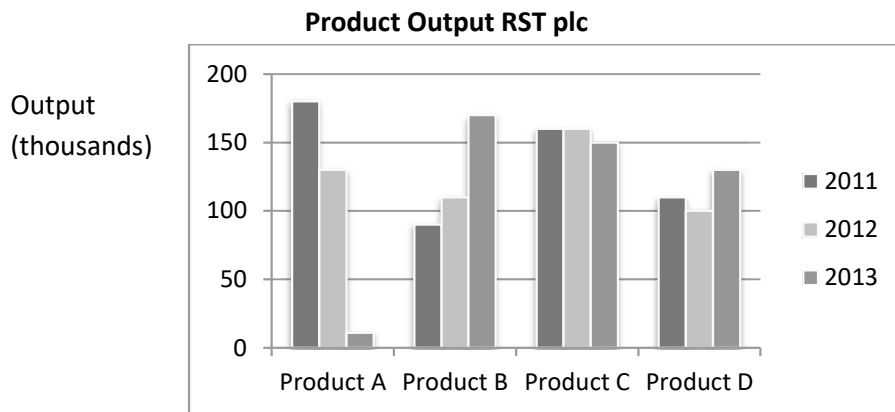

n = 17   n = 17   4/3 means 43

a) Calculate the mean score for the boys
b) If the mean mark for the girls was 25.9 who did better in the test – boys or girls?
   You must justify your answer

9.   The bar graph below shows the output of four products(in thousands)
      for RST plc from 2011 to 2013

Product Output RST plc

a) In which year was there an output of exactly 100000?
b) Which product's output was almost the same over the three years?
c) Which product's output has continued to increase over the three years?

10. Bottles of mineral water can be bought in boxes of 60 from the Cash and Carry.
     A bottle of mineral water contains 330 ml.
     a) What is the total volume contained in a box?
     b) Jack needs to drink 0.5 litres three times a day as part of his training programme.
        How much water does Jack need each week?
     c) Jack claims that if he buys three boxes of water this will be enough to last him six
        weeks.
        Is his claim true?
        (Explain your answer clearly using calculations)

11. Sophia has been living in Edinburgh for 10 years and is returning to Estonia for a visit. She
     changes £1400 into Euros when the **rate of exchange was £ 1 = 1.19 Euros.**
     a) How many Euros will she receive?
     b) If she spends 1240 Euros while in Estonia, how many Euros will she have left?
     c) When she returns to Edinburgh, she changes the remaining Euros back into pounds.
        If the **rate of exchange was £ 1 = 1.23 Euros,** how many pounds did she receive?
        (**Answer to the nearest pound)**

12.

    c) A film started at 1941and finished at 2218. How long did the film last?

    d) Jodie flew from Manchester to Prague for a short break. The plane left at 1149 local time and arrived in Prague at 1507 local time. If the time in Prague is one hour ahead of the time in Britain, how long was the flight?

13   Mr and Mrs Carter and their two children aged 8 and 12 are going to Aviemore

    for 3 days skiing.

    They are staying in a lodge which costs £ 385 for the three days.

    The tables below show the costs for lift passes, equipment hire and instruction

LIFT PASS PRICES*

Type	Adult	Child
1 Day	£34.50	£20.50
2 Days	£65.00	£38.50
3 Days	£92.00	£55.50
4 Days	£114.00	£68.00
5 Days	£139.00	£82.00
Seniors/Student 1 Day	£25.00	-
1/2 Day from 12.30pm	£23.00	£14.00

EQUIPMENT HIRE* Daily Rates

Type	Adult	Child
Ski or Board Hire - skis, boots, Poles or snowboard, boots (Deposit required for all hire items)	£24.25	16 and under £17.70

INSTRUCTION*

Duration	Adult	Child
1 Day	£89.00	£75.00
2 Days	£169.10	£142.50
3 Days	£240.30	£202.50

- The children need to hire equipment for the three days
- They each have instruction for one day
- They each buy lift passes for two days

They eat out for two nights and the total bill for this is £124

a) What is the total cost of this holiday?
b) Last year exactly the same holiday cost £1020.40. Has the price gone up this year? **(Justify your answer)**

NATIONAL 5 NUMERACY

PRACTICE ASSESSMENT 1 ANSWERS

1. £102 000   2.   7/20