**National 5 S4 October Assessment revision booklet (calculator)**

1a) A car is sold for £13000. Every year, its value drops by 6%. How much will it be worth in 7 years? Round your answer to 2 decimal places.

b) In 2020, a town has a population of 20,000, after a 15% increase from last year. What was the town’s population in 2019? Round your answer to the nearest whole number.

c) A T-Shirt is sold at 20% off, at £33.80. How much was the original price?

d) In 2016, John put £5600 into a savings account, which has an interest rate of 5.5%. **How much interest** would John have in 2020? Round to the nearest pound.

Q2) Over a 10-day period, the temperature at noon is measured in Glasgow and London (in ).

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Glasgow** | **3** | **4** | **3** | **5** | **6** | **6** | **5** | **3** | **2** | **6** |
| **London** | **0** | **4** | **7** | **9** | **8** | **7** | **10** | **7** | **6** | **5** |

1. **For each city,** find the mean and the standard deviation of the temperature, round your answers to 2 decimal places.
2. Use the mean and standard deviation from part (a) to **make two valid comments comparing the temperatures in Glasgow and London.**

Q3a) Solve the following quadratic functions, rounding your answers to 1 decimal place:

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  | d) |

Q4) Find the arc length for the following sectors (round to 3 significant figures):

Diagram

Description automatically generatedDiagram

Description automatically generated

b)

a)

Q5) Find the area of the following sectors:

b)

a)

Diagram

Description automatically generatedDiagram

Description automatically generated

Q6) Find the size of angle in the following sectors (round your answer to the nearest degree):

A picture containing pie chart

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Diagram

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b)

a)

A picture containing diagram

Description automatically generatedQ7) Calculate the area of the shaded area, rounding to 2 decimal places.

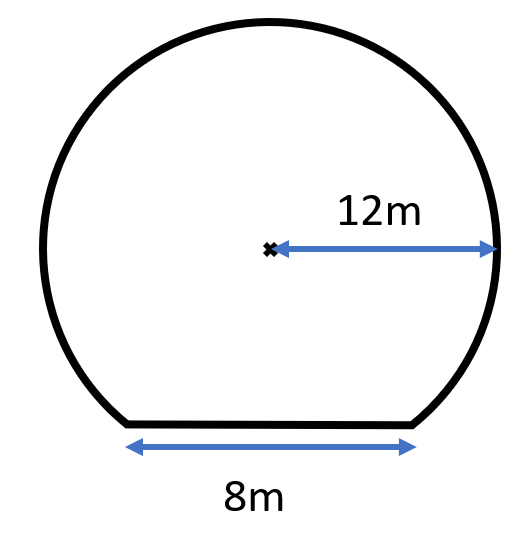
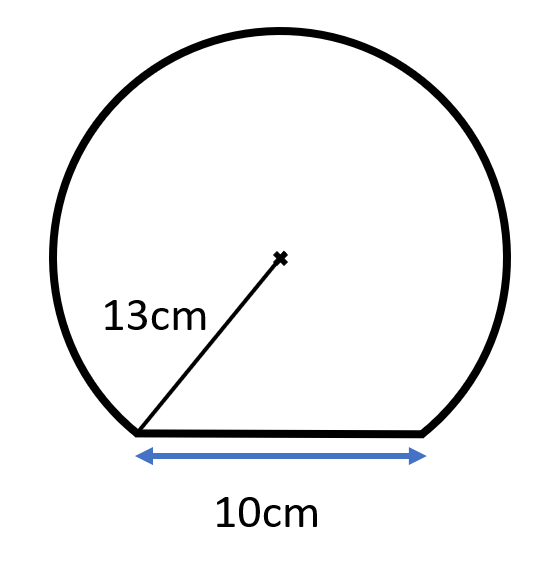
A picture containing text, athletic game, sport

Description automatically generatedQ8a) Calculate the volume of a sphere with a radius of 4.5cm. Round your answer to 3 significant figures.

1. Chart

   Description automatically generatedThe height of the square-based pyramid below is 21cm. Calculate the pyramid’s volume.

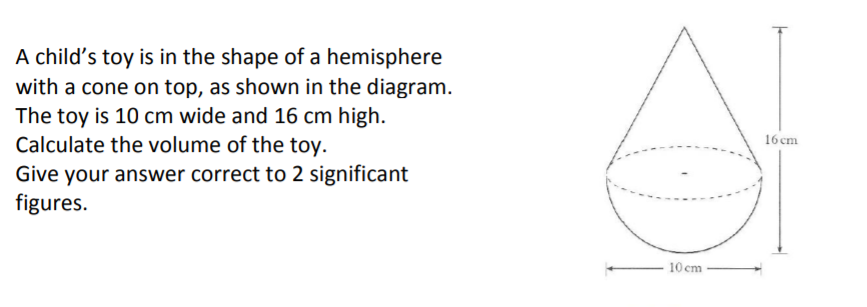
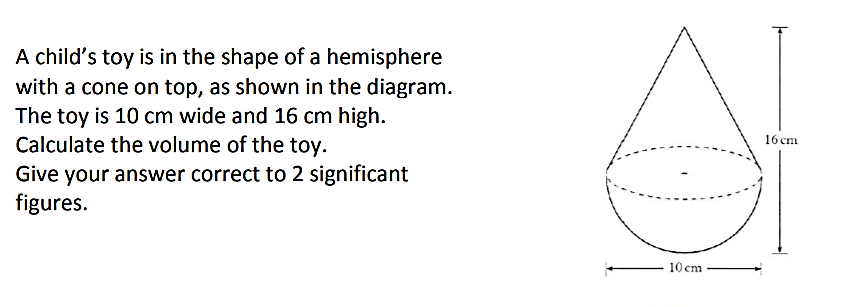
Q9) Calculate the height of the following shapes. Round your answer to 1 decimal place:



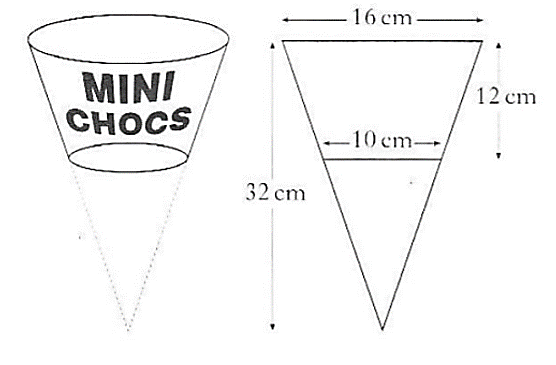
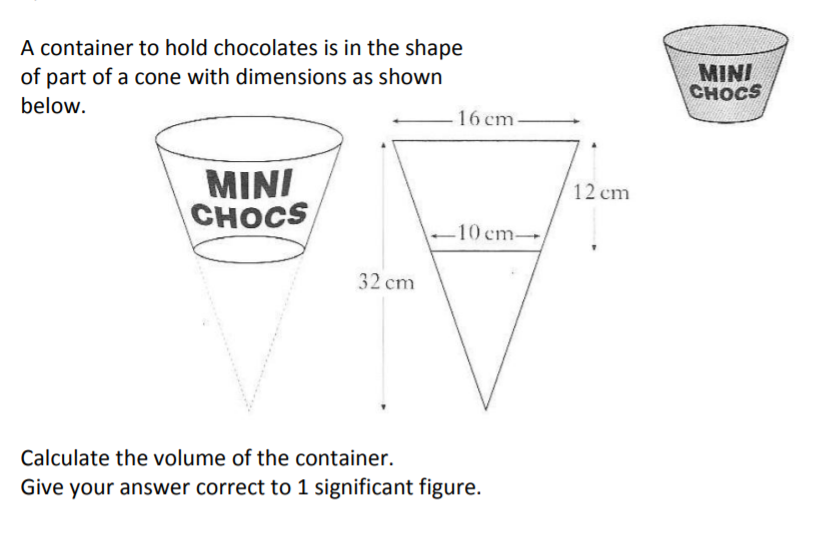
a)

b)

Q10)



Q11)



Diagram

Description automatically generatedQ12) Calculate the perimeter of the shaded area. Round your answer to 2 significant figures.