

Topics

Algebra – Can I solve equations with fractions?

1 ► 2019 JCOL Paper 1 – Question 5

Statistics – Can I work with pie charts?

2 ► 2019 JCOL Paper 2 – Question 8

Sets – Can I use Venn diagrams to solve problems?

3 ► 2020 JCOL Sample Paper – Question 5 (f)

Area, Perimeter and Volume – Can I calculate the volume of a cylinder?

4 ► 2006 JCOL Paper 2 – Question 2 (c)

Geometry – Can I apply the alternate and corresponding angles theorems?

5 ► 2016 JCOL Paper 2 – Question 6

www.mathspoints.ie for **worked solutions** to these questions.

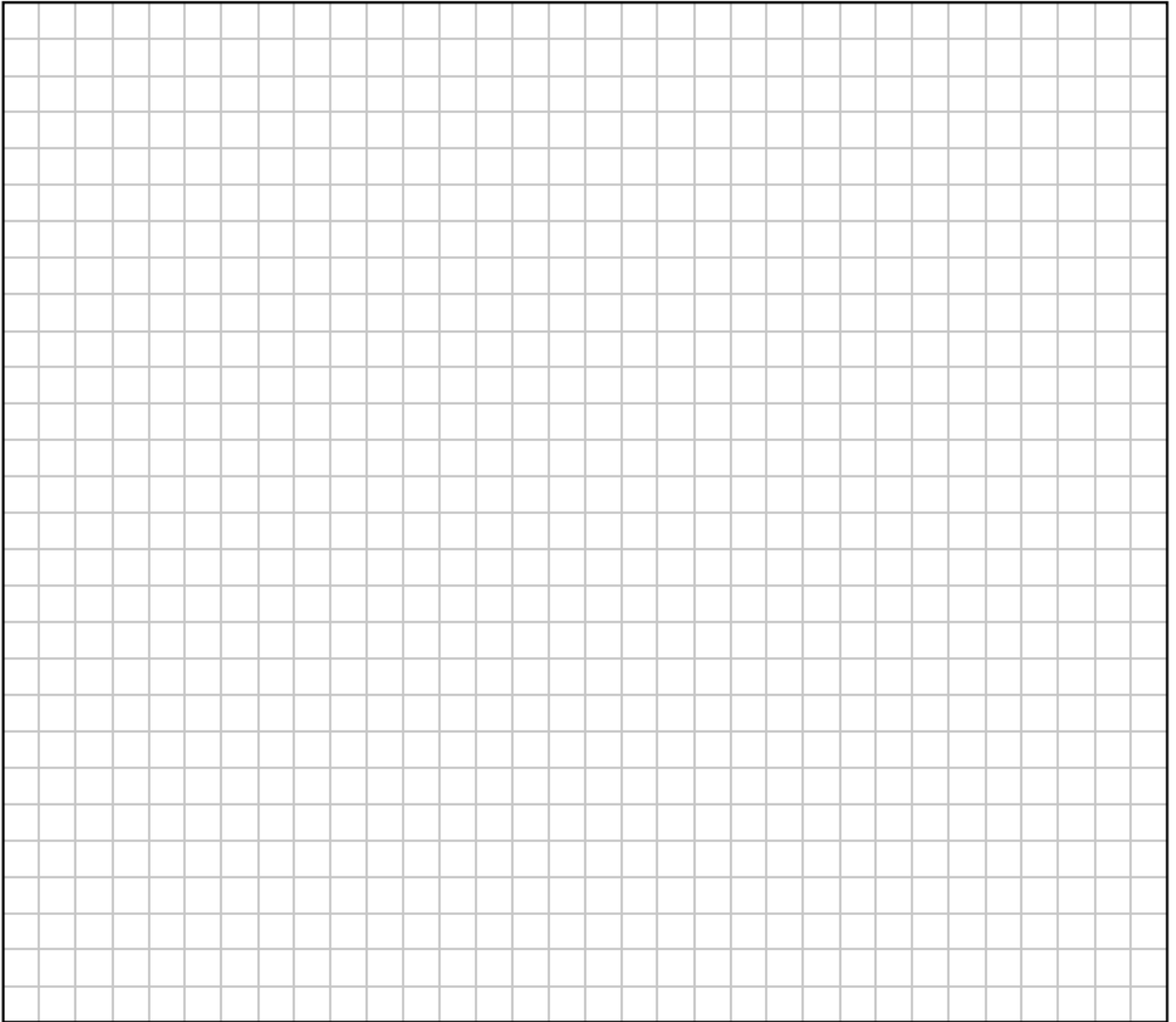
 [JCOL Resources by Topic](#)

 [JCOL Revision – 50 Common Questions](#)

1 ► 2019 JCOL Paper 1 – Question 5

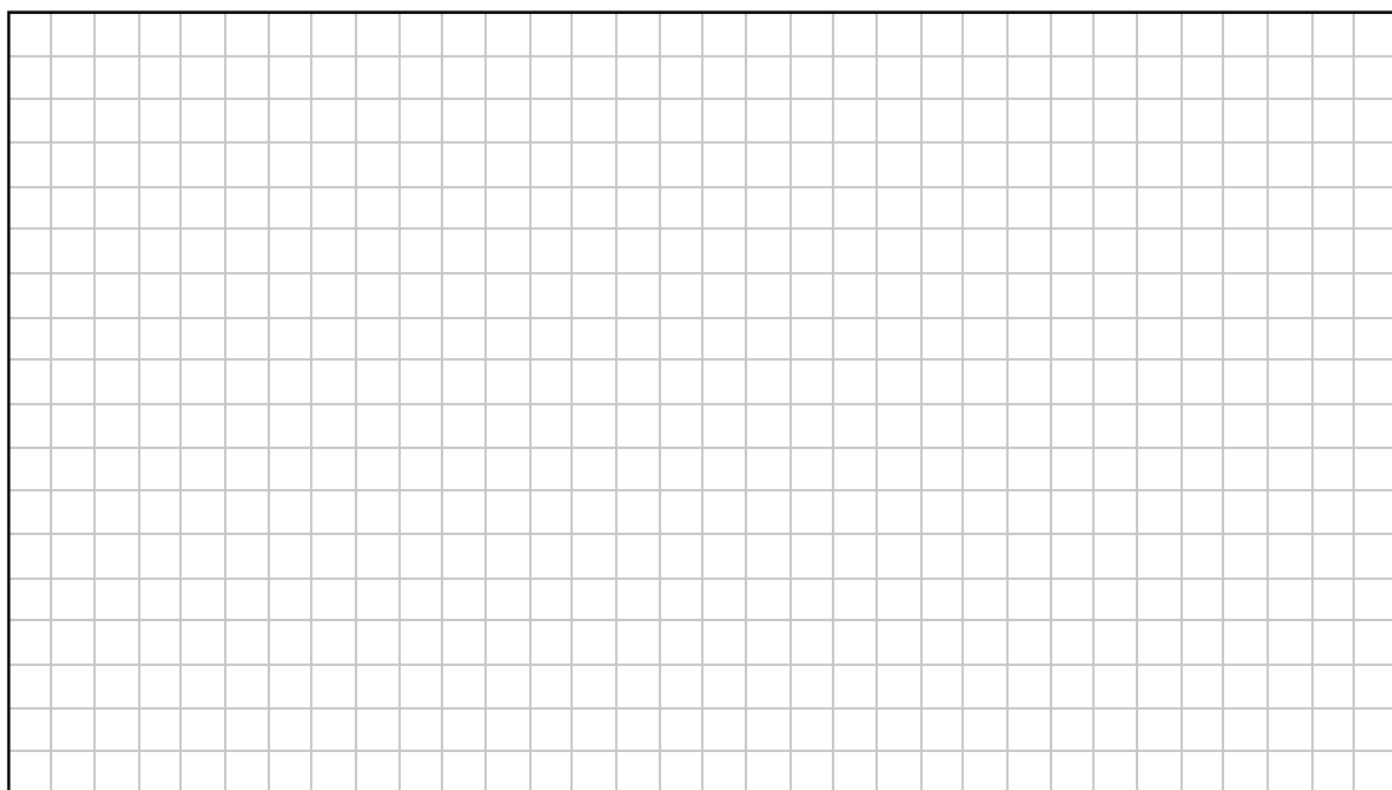
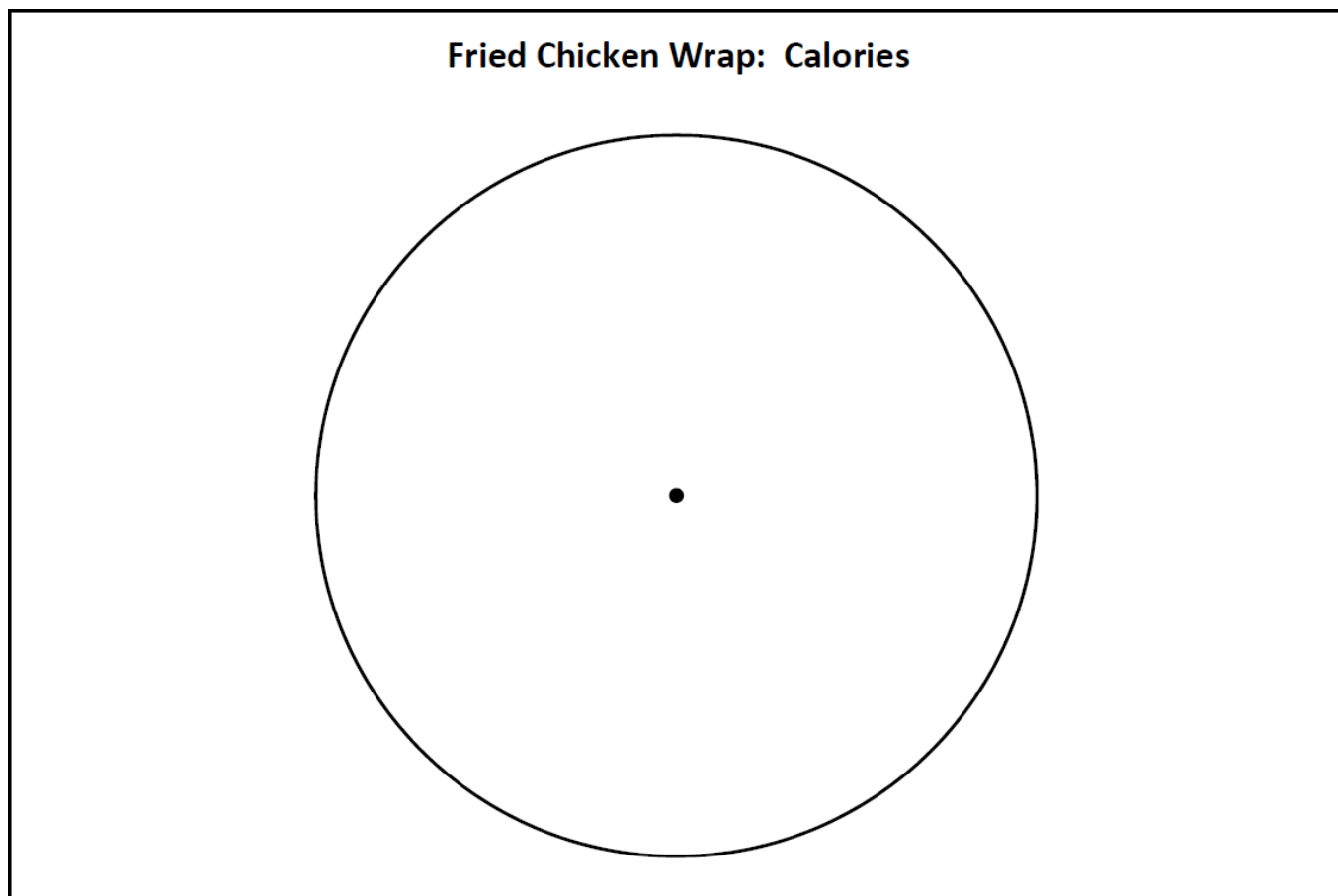
Solve the equation:

$$\frac{2x + 3}{5} = 7$$



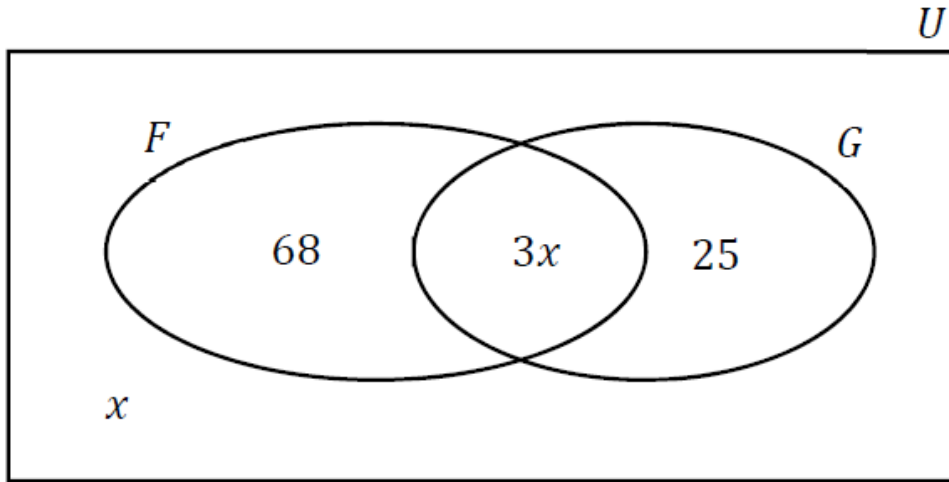
(d) Complete the pie chart below to show the information in the table.

Label each sector clearly with the name of the ingredient **and** the size of the angle.



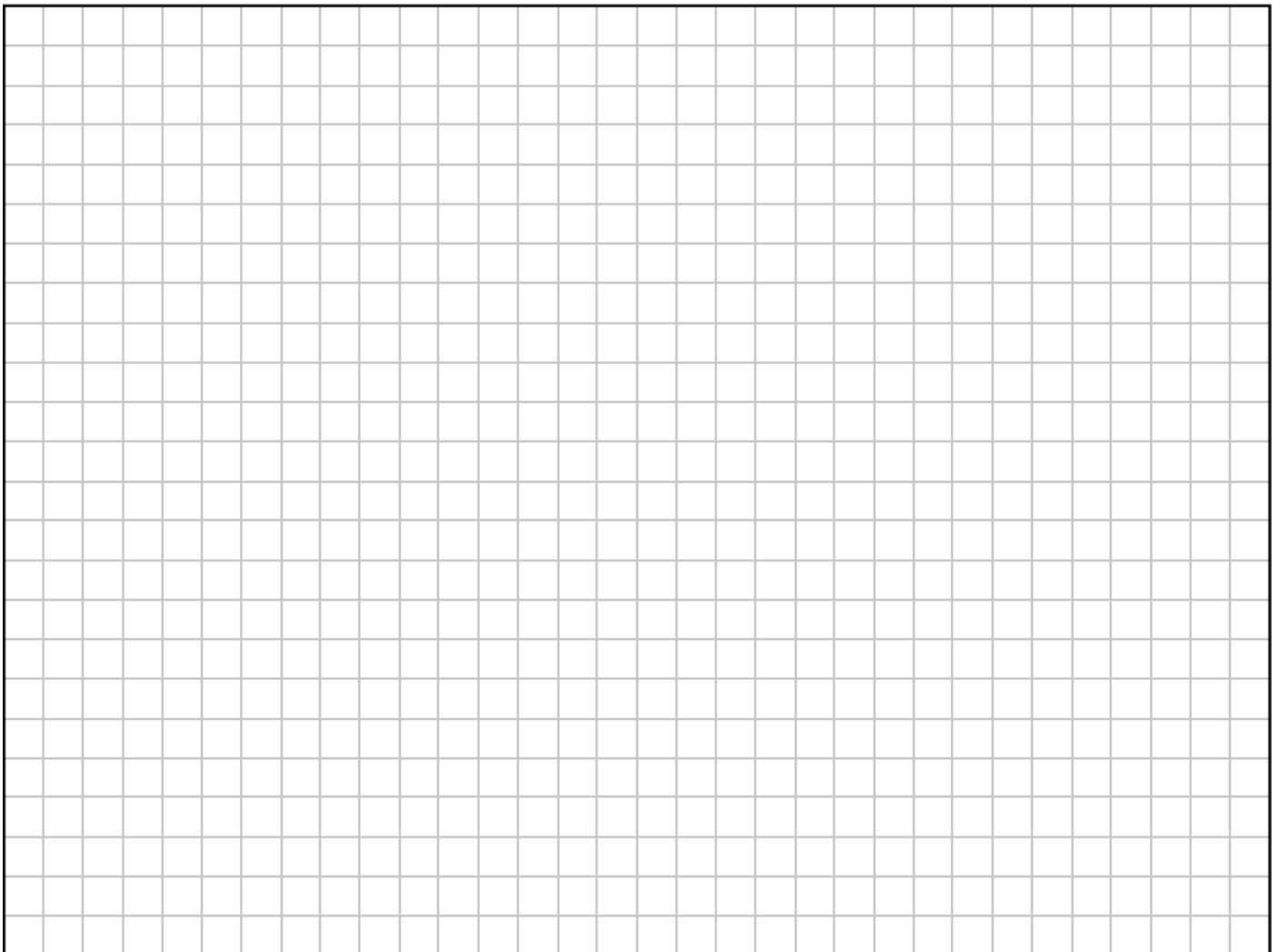
3 ► 2020 JCOL Sample Paper – Question 5 (f)

Kate carried out a survey on the students in her year (U) to see how many study French (F) or German (G). Her results are shown in the Venn diagram below, where $x \in \mathbb{N}$.



Kate finds out that there are 141 students in total in her year.

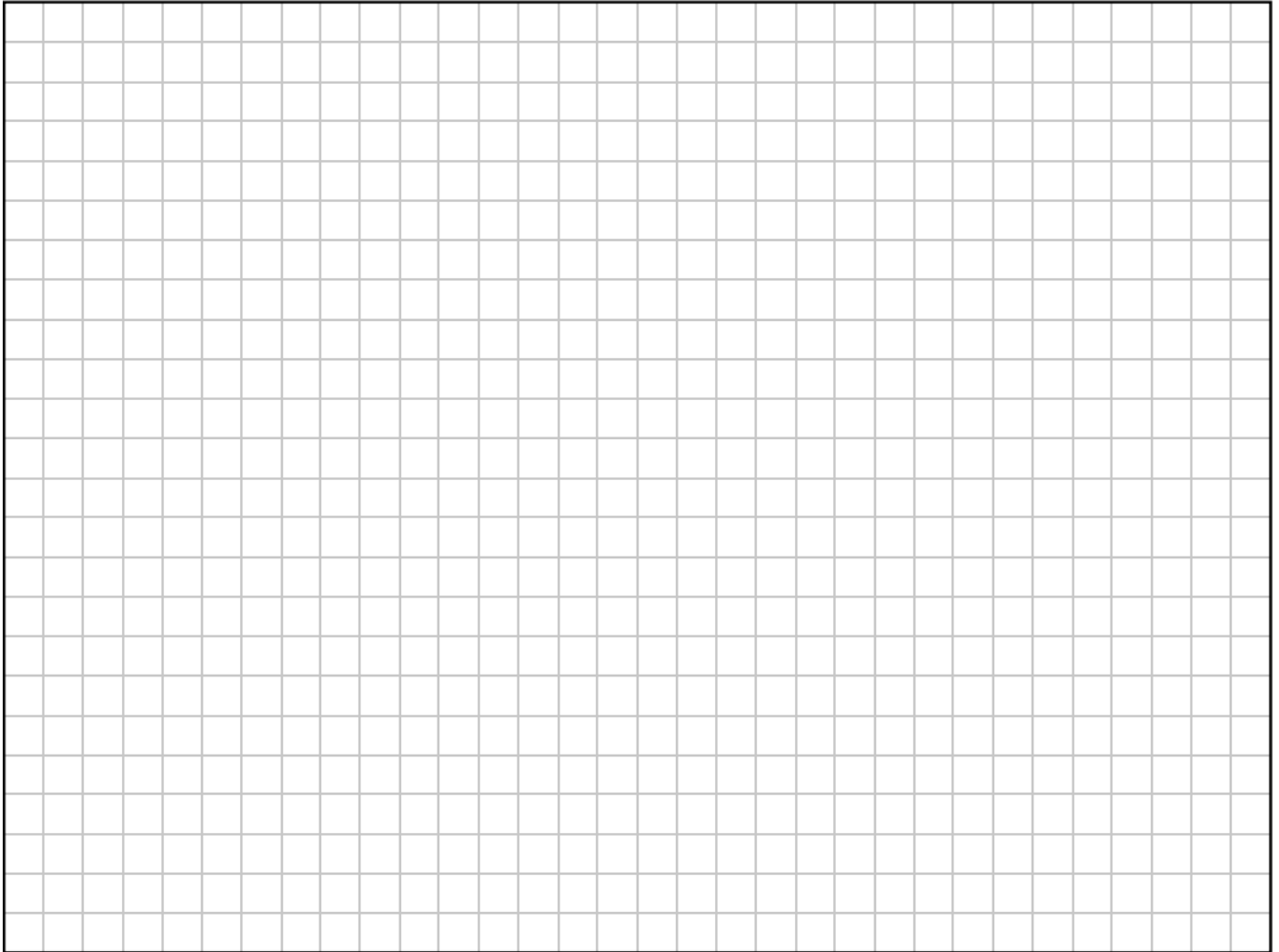
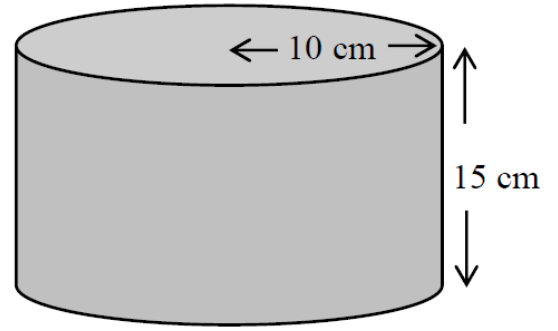
Work out the value of x .



4 ► 2006 JCOL Paper 2 – Question 2 (c)

A solid metal cylinder has radius 10 cm and height 15 cm.

Taking π as 3.14, find, in cm^3 , the volume of the solid metal cylinder.



5 ► 2016 JCOL Paper 2 – Question 6

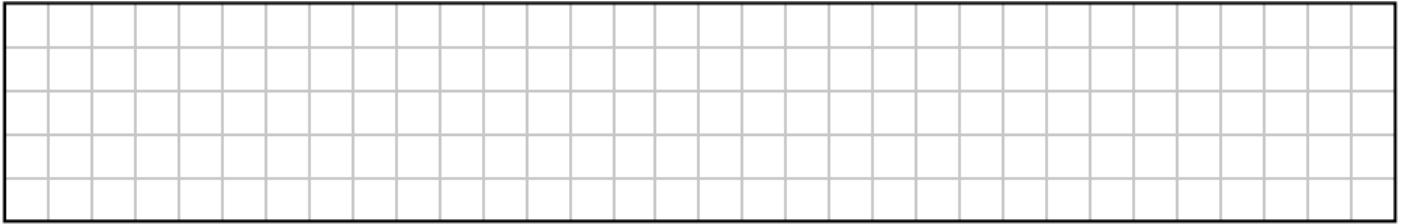
The triangle BOP has:

one side that is 8 cm long

one angle of 40°

one angle of 60° .

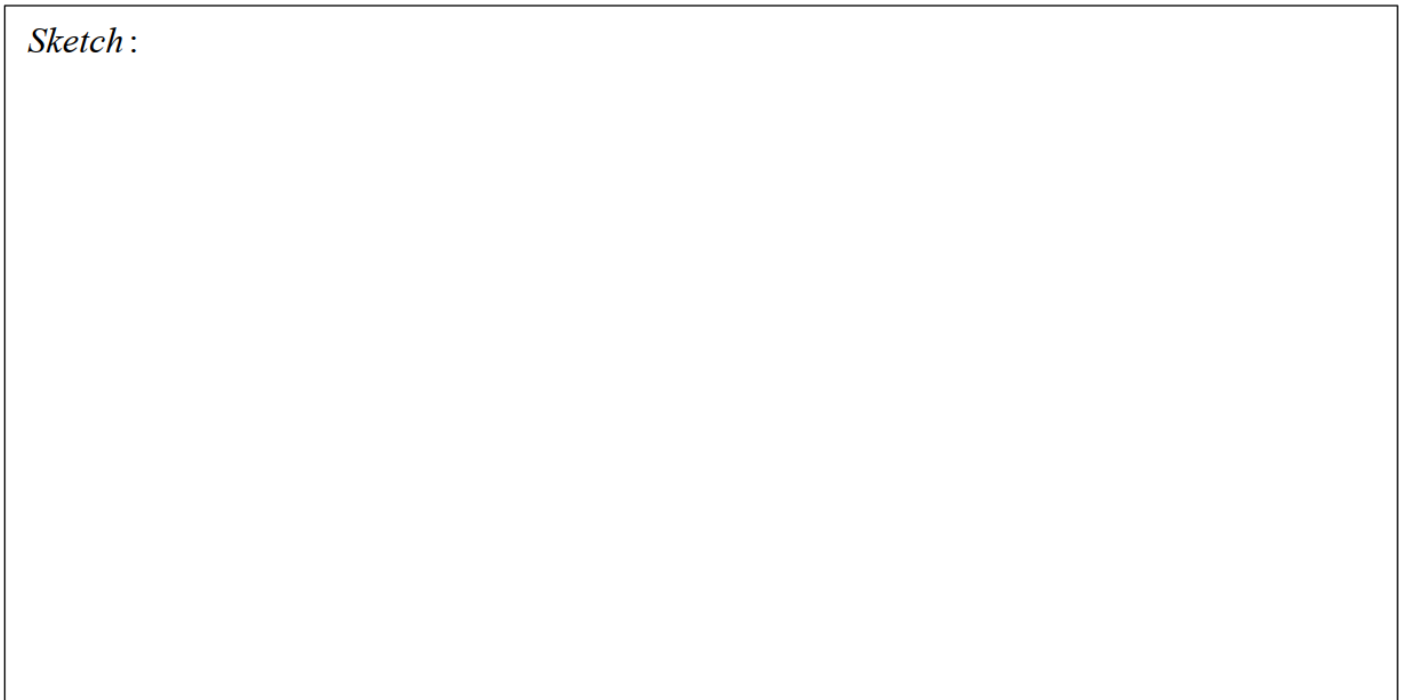
(a) Work out the size of the **third angle** in the triangle BOP .



(b) Draw a **sketch** of one such triangle BOP .

On your sketch, **write in** the size of **all 3 angles**, and the length of one of the sides.

Sketch:



(c) **Construct** the triangle BOP from your sketch.

Construction: