FluidMaths

GCSE Mathematics (Grade 9-1)

Problem Solving
Angles Set 1
Straight lines and Parallel lines
Questions

Some useful strategies in problem-solving

- Read the question carefully
- Sketch a diagram where applicable
- Take note of key information
- Write down any formulae you may need
- Tackle the problem in bite-size rather than as a whole
- Concentrate on the part of the problem you understand and start from there
- Collaborate with a partner and share ideas
- Use a dictionary to find the meaning of any confusing words
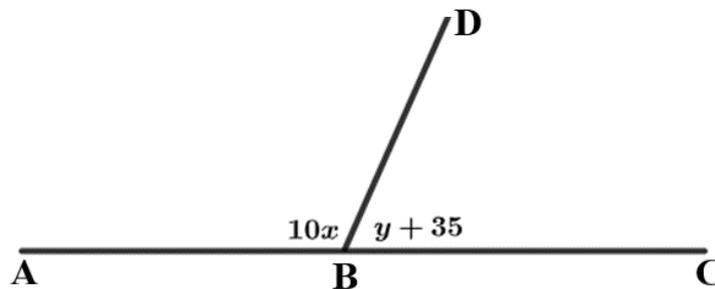- Check that your answers make sense in the context of the question

1 The diagrams below show two straight lines AC and DF
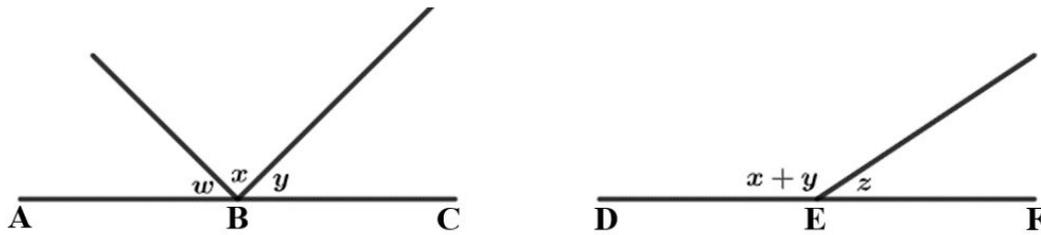
Given that $w: x: y = 2: 5: 3$,
calculate the size of angle z.   **[4marks]**

2 The diagram shows a straight-line AC
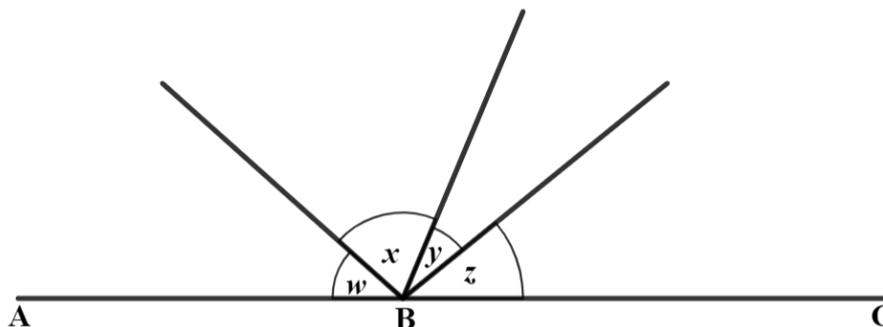

Angle $ABD = 10x$
Angle $CBD = y + 35$
The ratio of $x: y = 2: 9$
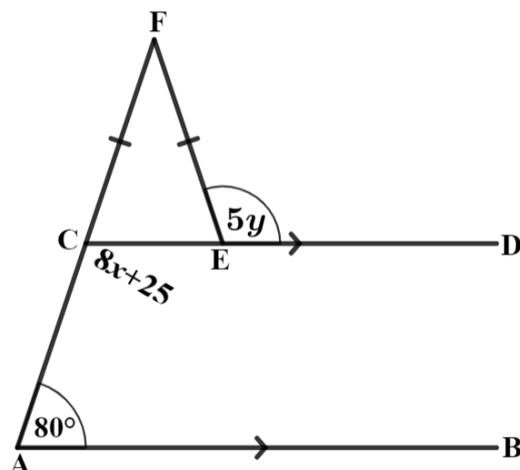Find the size of the larger angle.   **[4marks]**

3 In the diagram below, ABC is a straight line

Given that $w + x + y = 140$ and $x + y + z = 130$,
What is the value of $x + y$?   **[2marks]**

4	CEF is an isosceles triangle

CF = EF
AB is parallel to CD
Angle BAC = 80
Angle ACD = $8x + 25$
Angle DEF = $5y$
Find the values of x and y **[4marks]**

5	In the diagram below,

AC is parallel to DE
BD is parallel to EF
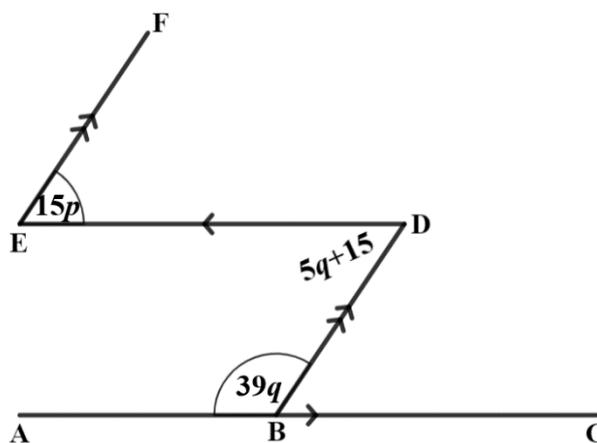
Angle ABD = $39q$
Angle BDE = $5q + 15$
Angle DEF = $15p$
Calculate the ratio of $p : q$ in its simplest form **[5marks]**