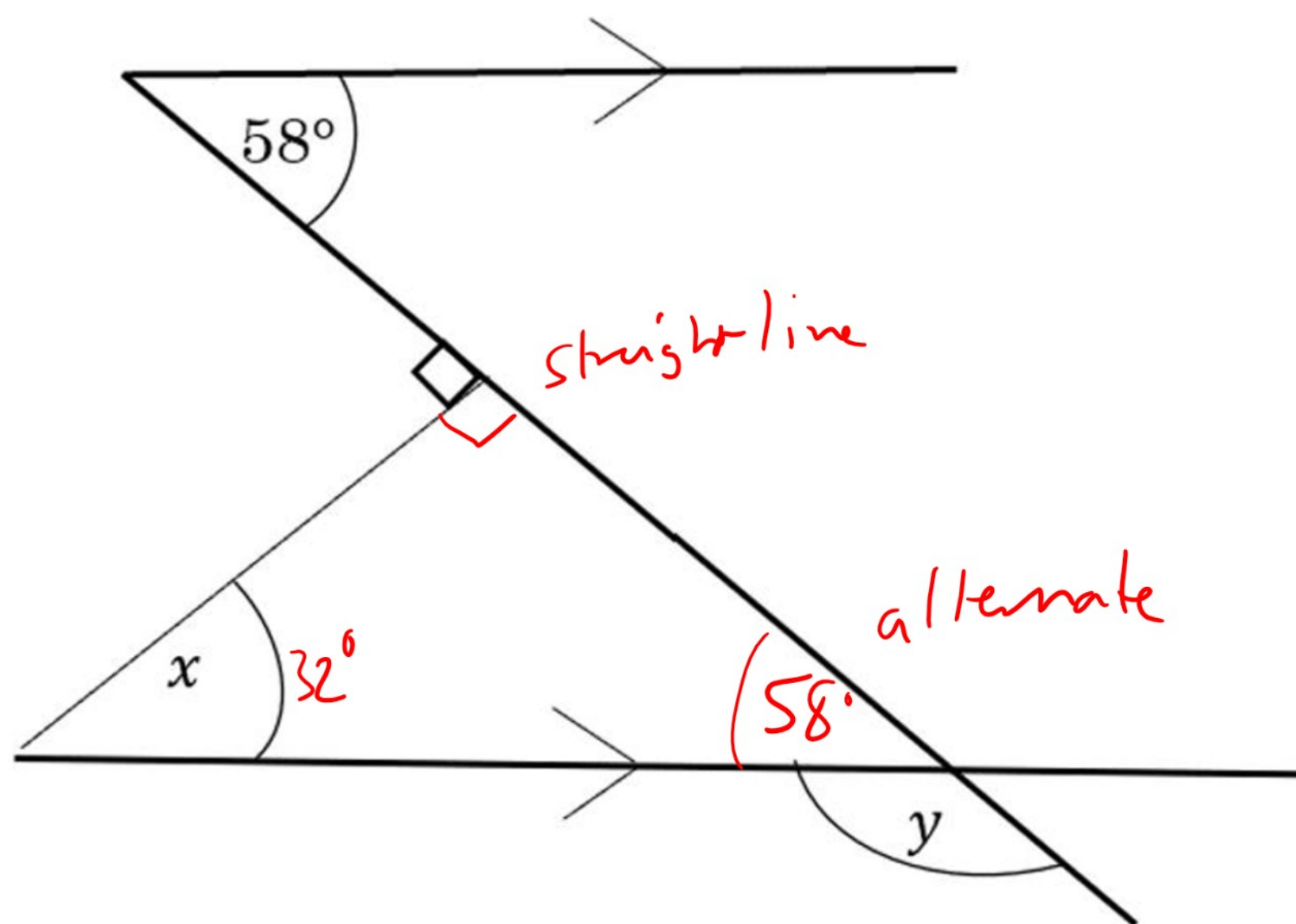


## Angles in Parallel Lines Exam Practice



Q1. Find the missing angles. Give reasons for your answers.



$$\bullet \quad x = 180 - 90 - 58$$

$$x = 32^\circ$$

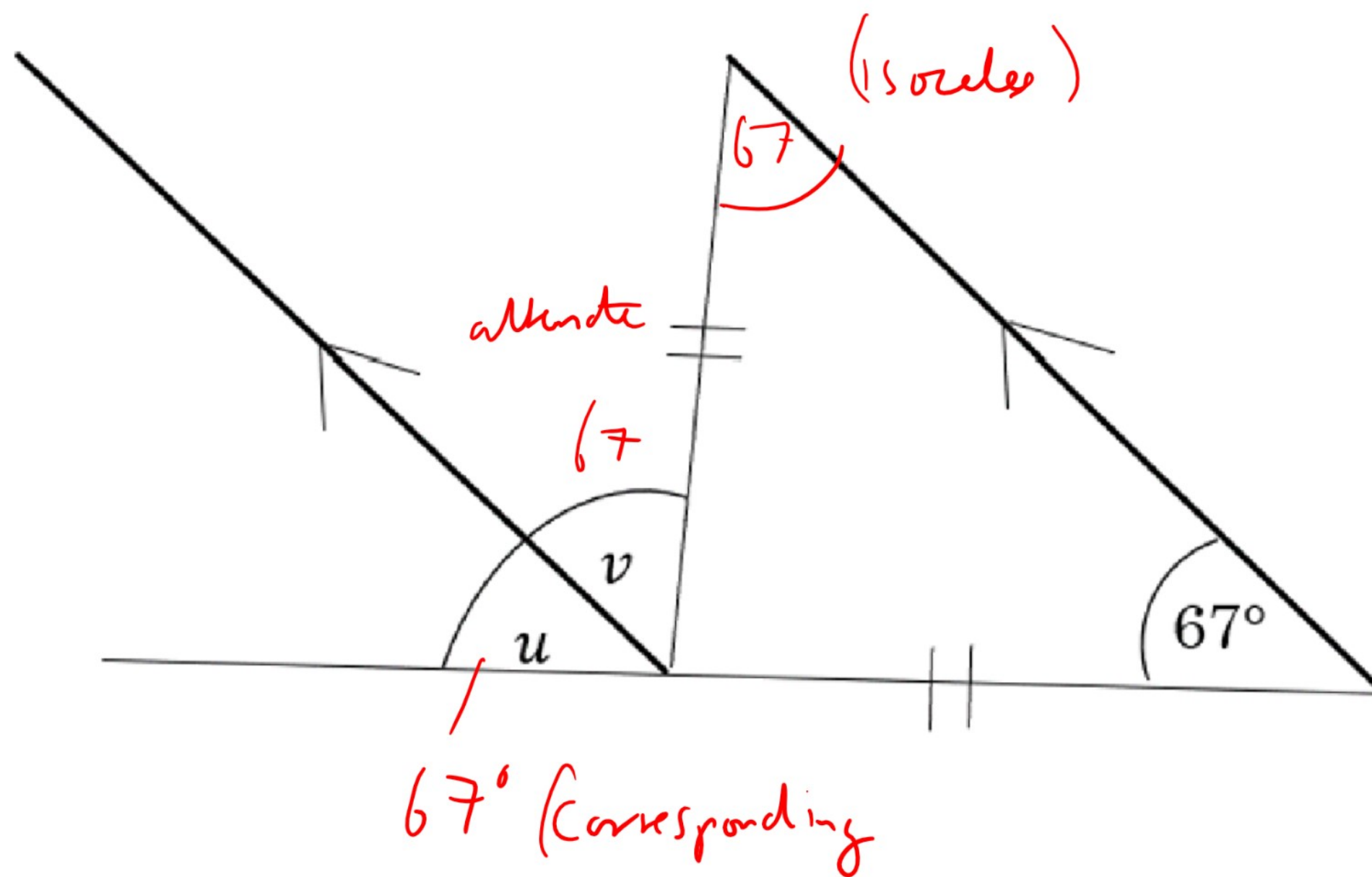
$$\bullet \quad y = 180 - 58$$

$$y = 122^\circ$$

Answer:  $x = 32^\circ, y = 122^\circ$   
(4 marks)



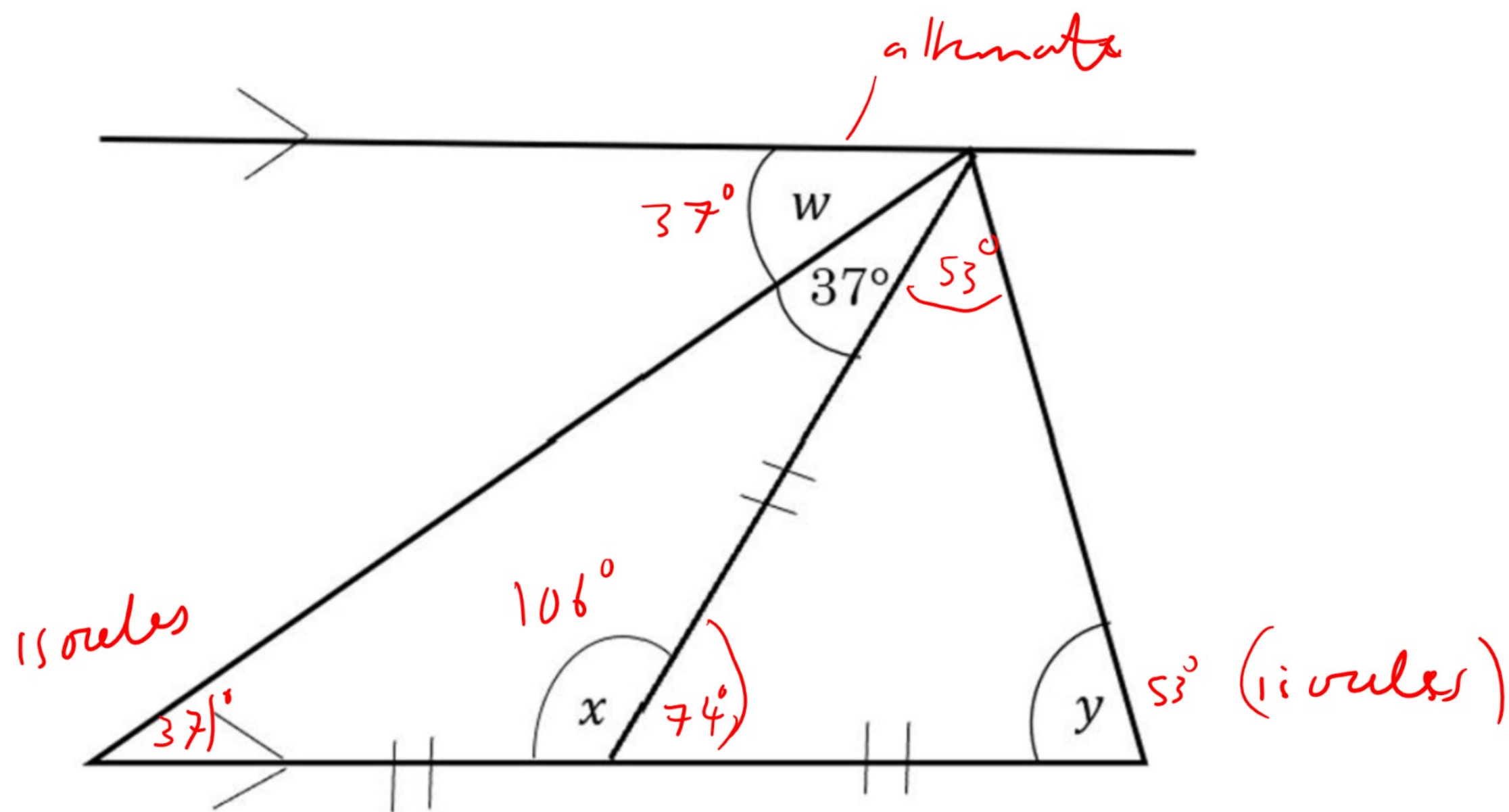
Q2. Find the missing angles. Give reasons for your answers.



Answer:  $u = v = 67^\circ$   
(4 marks)



Q3. Find the missing angles. Give reasons for your answers.



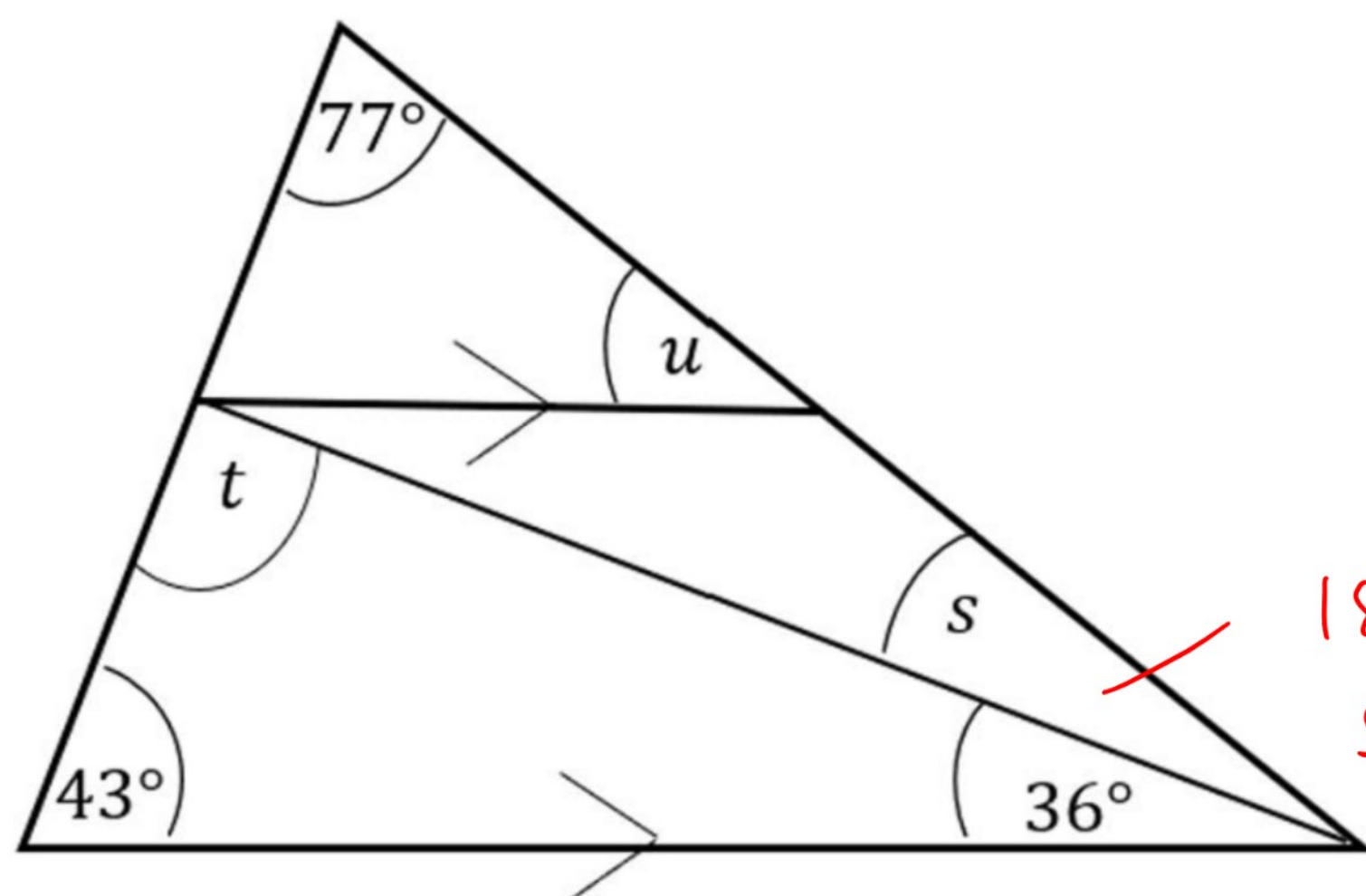
$$\begin{aligned} \cdot \quad x &= 180^\circ - 37^\circ - 37^\circ \\ x &= 106^\circ \end{aligned}$$

c

Answer:  $x = 106^\circ, y = 53^\circ, w = 37^\circ$   
(5 marks)



Q4. Find the missing angles. Give reasons for your answers.



largest triangle :  
 $180^\circ - 43^\circ - 77^\circ - 36^\circ$   
 $s = 24^\circ$

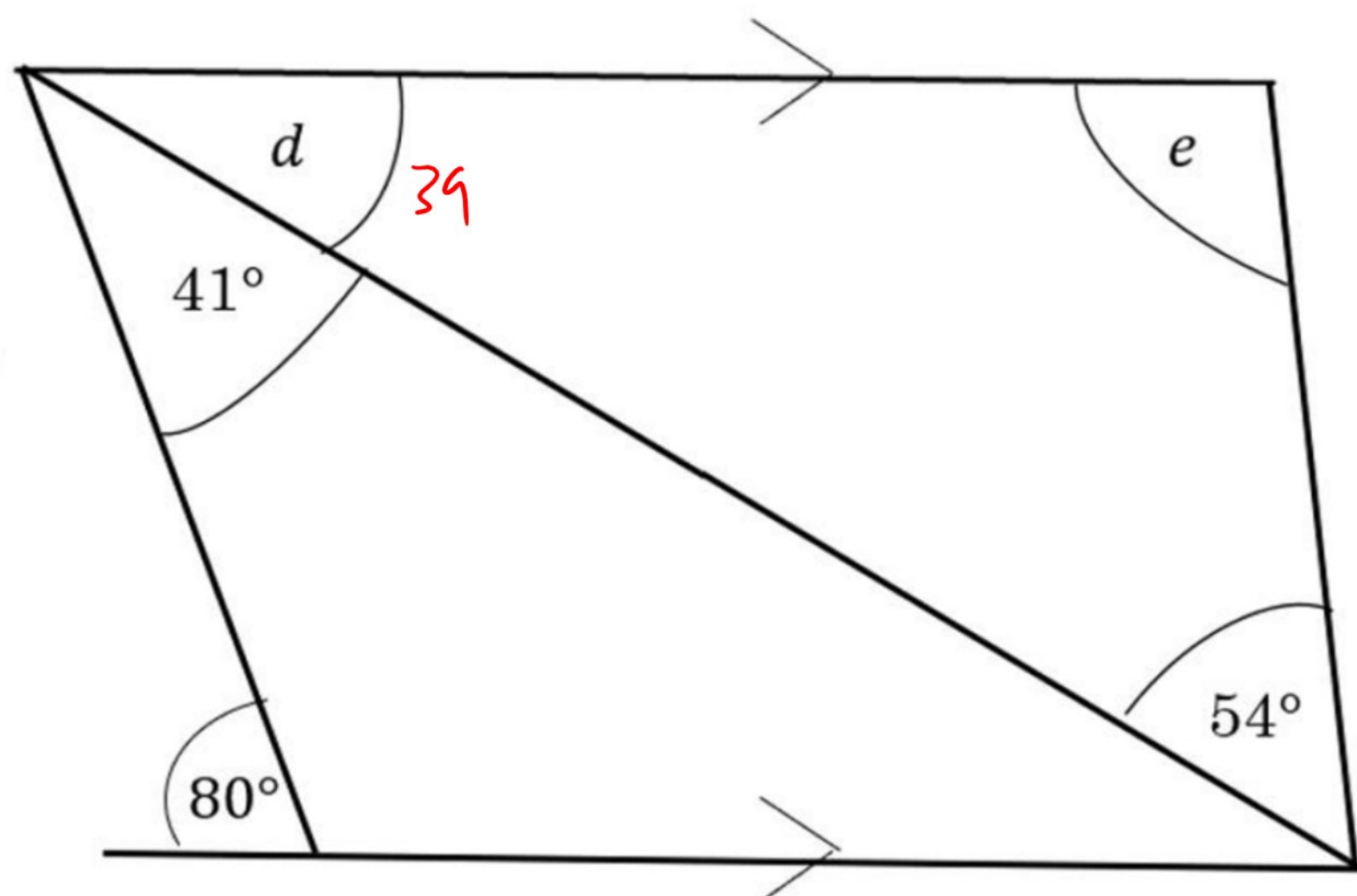
- $t = 180^\circ - 43^\circ - 36^\circ$   
 $\Rightarrow t = 101^\circ$
- $u$  corresponds to  $s + 36^\circ$  ( $24 + 36 = 60$ )  
 $\Rightarrow u = 60^\circ$

Answer:  $s = 24^\circ, t = 101^\circ, u = 60^\circ$   
(5 marks)





Q5. Find the missing angles. Give reasons for your answers.

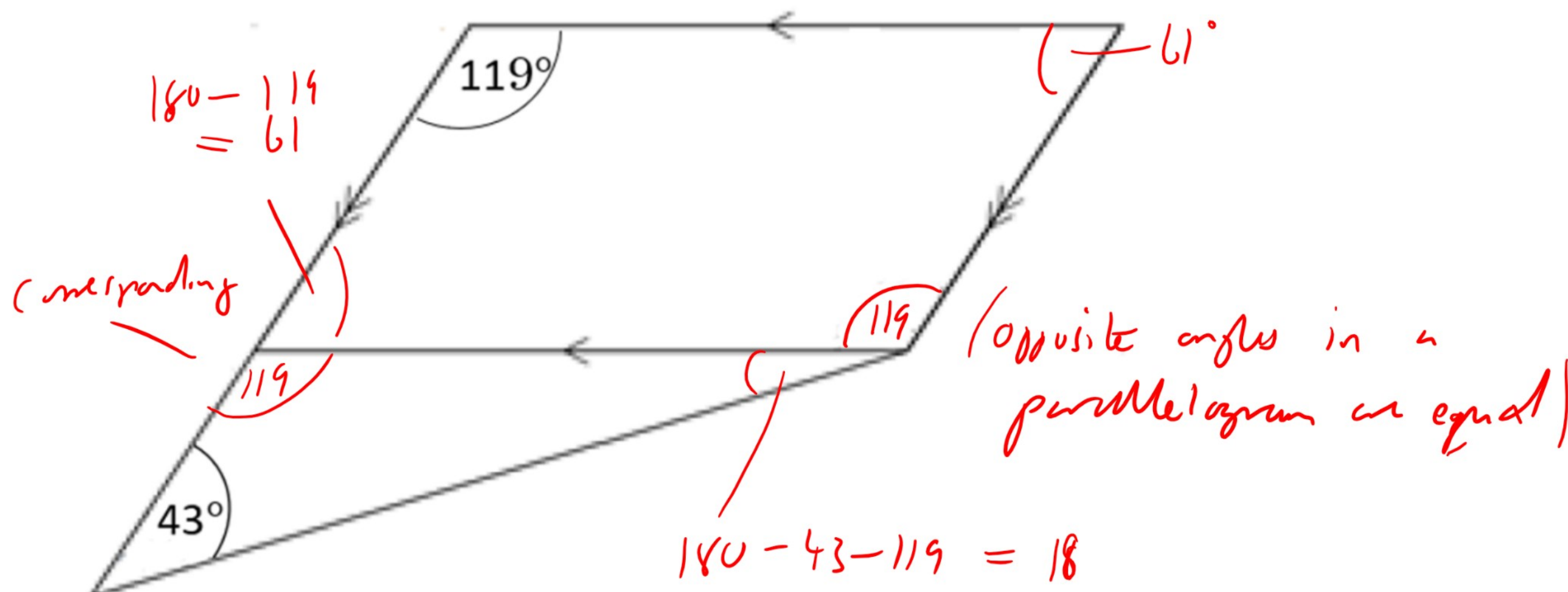


- $80^\circ$  corresponds to  $41^\circ + d$ ,  $\Rightarrow d = 39^\circ$
- $e = 180 - 39 - 54$   
 $\Rightarrow e = 87^\circ$

Answer:  $d = 39^\circ, e = 87^\circ$   
(4 marks)



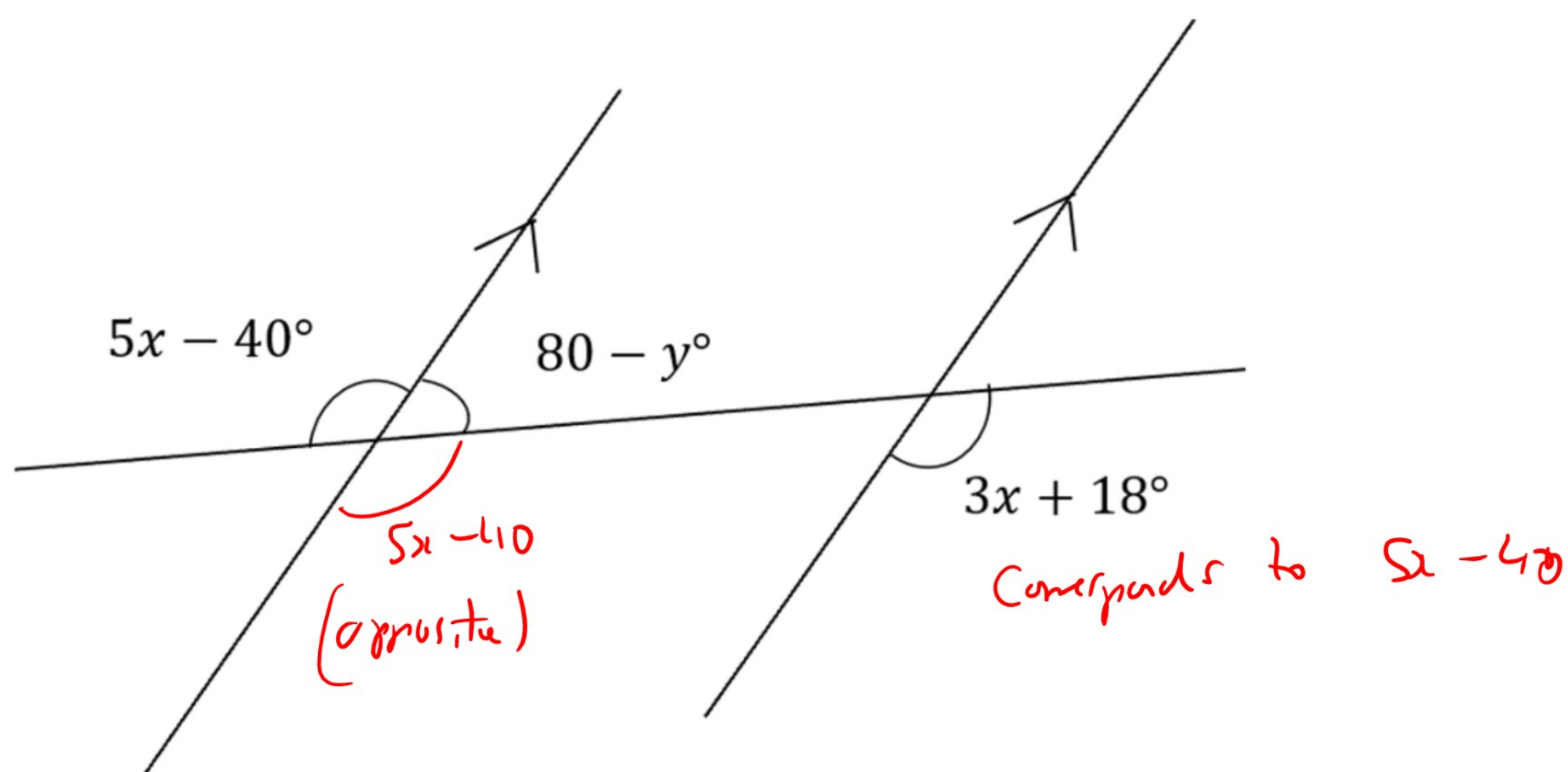
Q6. Find *all* unlabelled angles. Give reasons for your answers.



Answer: \_\_\_\_\_

(5 marks)

Q7. Find the value of  $x$  and  $y$



$$\bullet \quad 5x - 40 = 3x + 18^\circ$$

$$2x = 58$$

$$x = 29^\circ$$

$$\bullet \quad 80 - y + 5x - 40 = 180 \quad (\text{straight line})$$

$$\text{with } x = 29^\circ:$$

$$80 - y + 145 - 40 = 180$$

$$80 - y = 75$$

$$80 - 75 = y$$

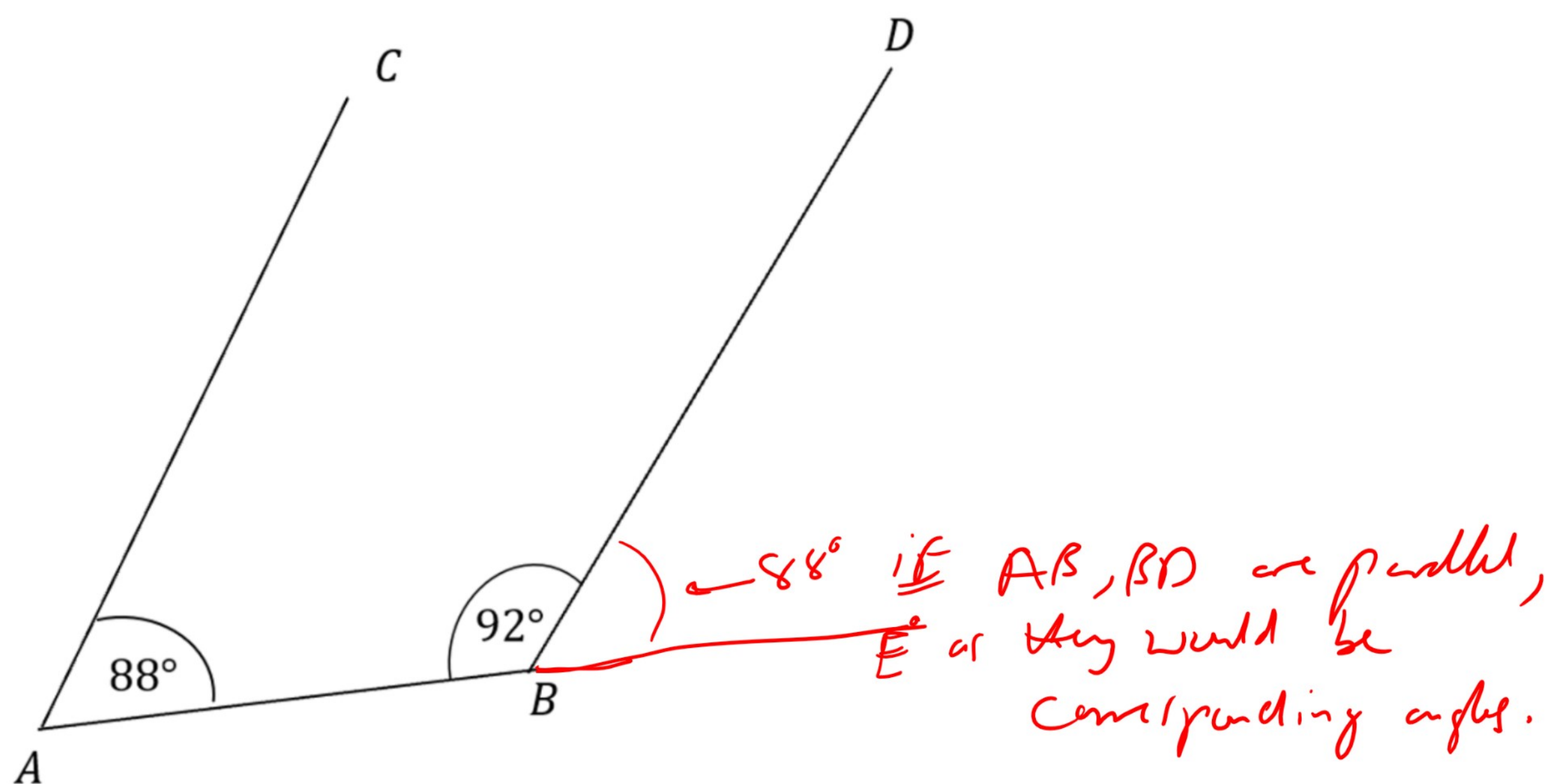
$$\underline{y = 5^\circ}$$

Answer:  $x = 29^\circ, y = 5^\circ$   
(4 marks)





Q8. Prove whether or not AC and BD are parallel lines.



- But since  $92^\circ + 88^\circ \neq 180^\circ$ , as we need for a straight line, so DBE cannot be  $88^\circ$ .  
 $\Rightarrow$  AB, BD are not parallel.

- OR Co-interior angles add up to  $180^\circ$  and as  $88 + 92 \neq 180^\circ$ , AB, BD are not parallel.

Answer: \_\_\_\_\_

(2 marks)