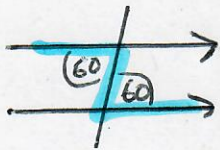


MATHSDIY

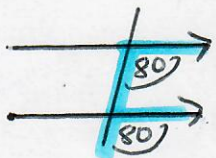
GCSE TOPIC BOOKLET

SOLUTIONS

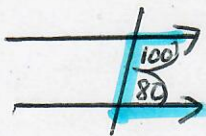
ANGLES: PARALLEL LINES



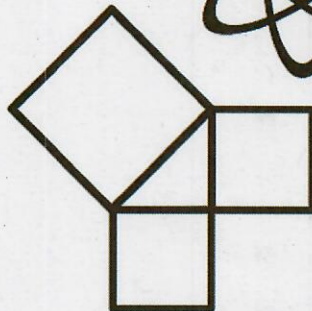
'Z' angles - **ALTERNATE**
SAME



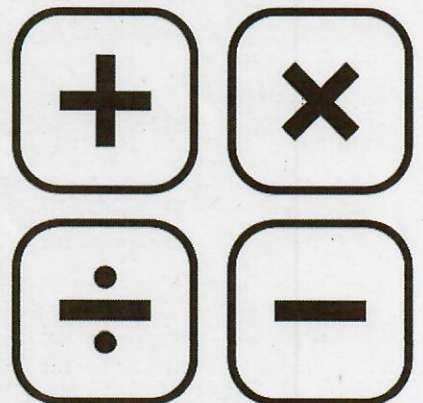
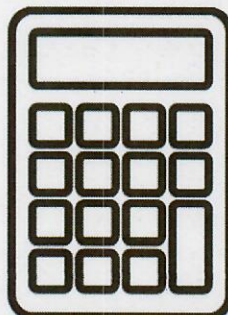
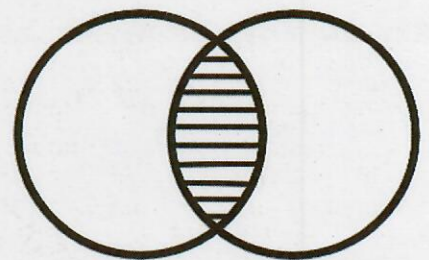
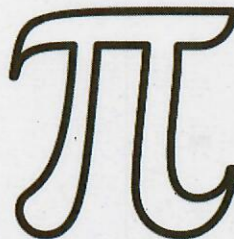
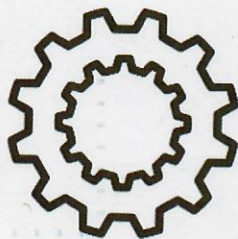
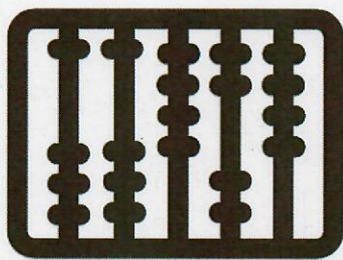
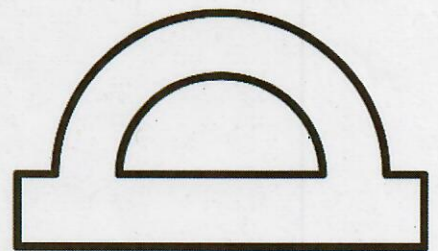
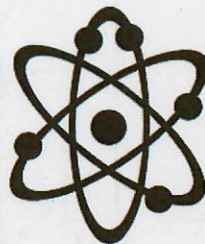
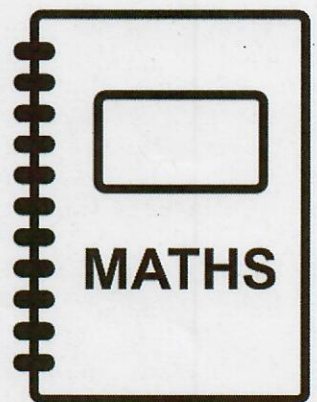
'F' angles - **CORRESPONDING**
SAME



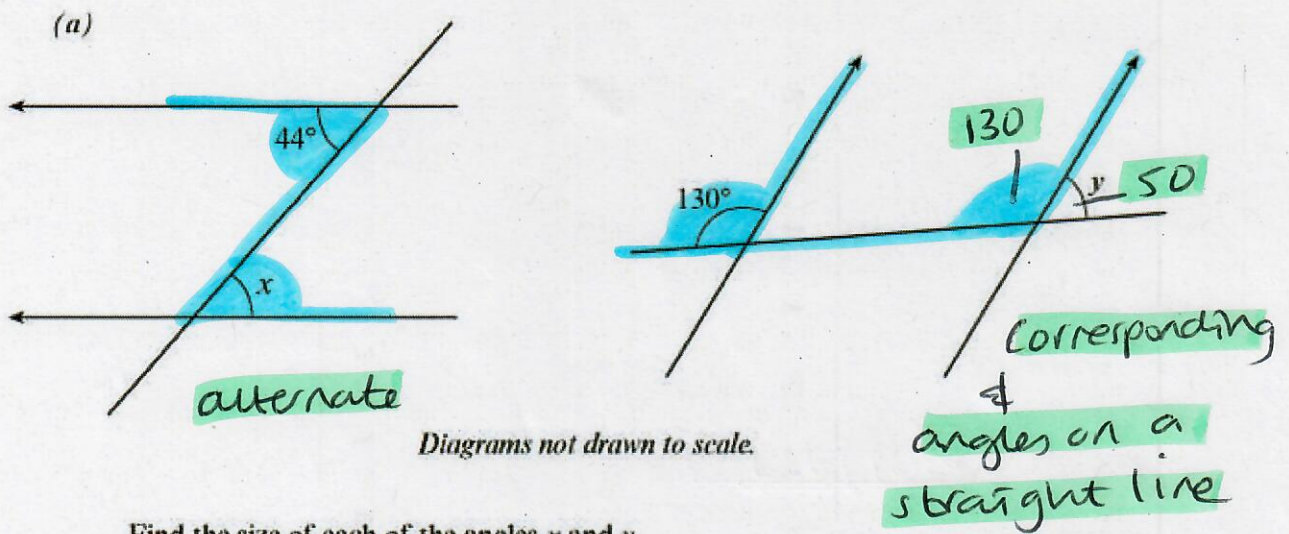
'goalpost' **INTERIOR**
total 180°



$$a^2 = b^2 + c^2$$



1.



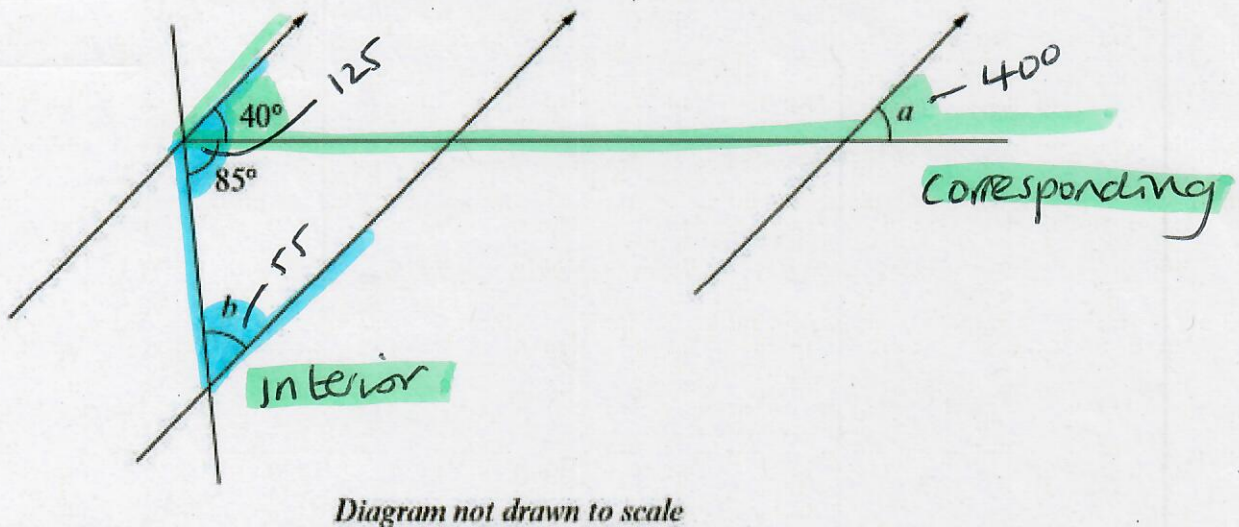
Find the size of each of the angles x and y .

$x = \underline{44}^\circ$ $y = \underline{50}^\circ$

[3]

2.

Write down the size of the angles marked a and b in the diagram.



$a = \underline{40}^\circ$ $b = \underline{55}^\circ$

[3]

3. Find the size of each of the angles marked p and q .

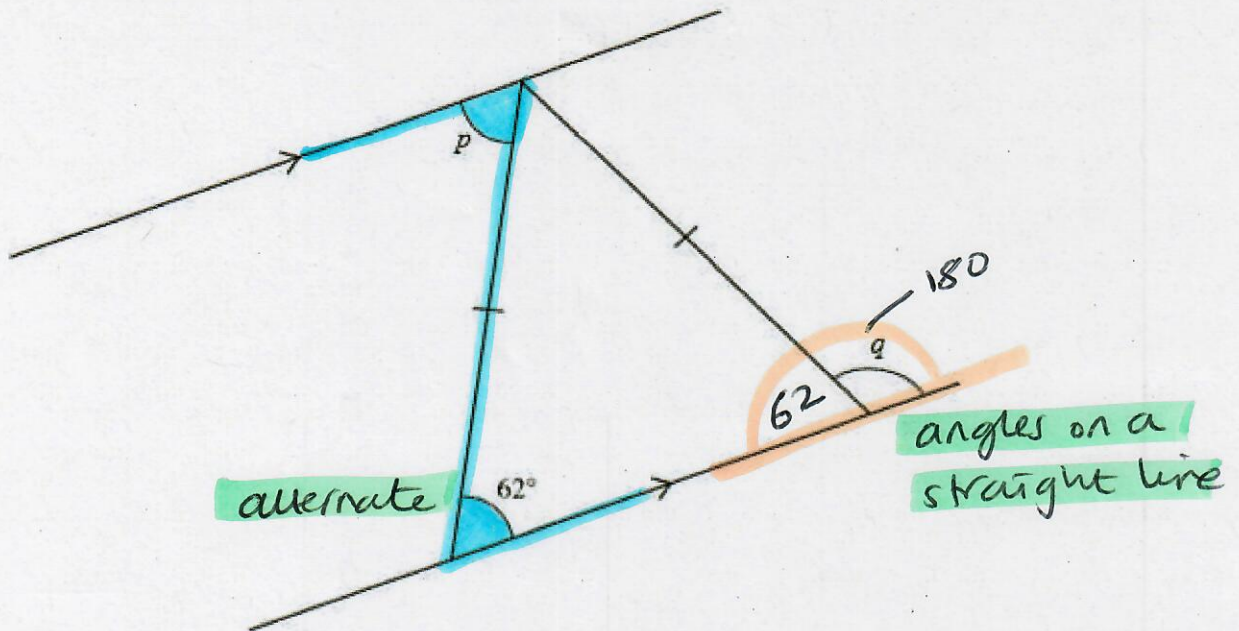


Diagram is not drawn to scale.

$$q = 180 - 62 = 118$$

$p = 62^\circ$

$q = 118$ [3]

- 4.

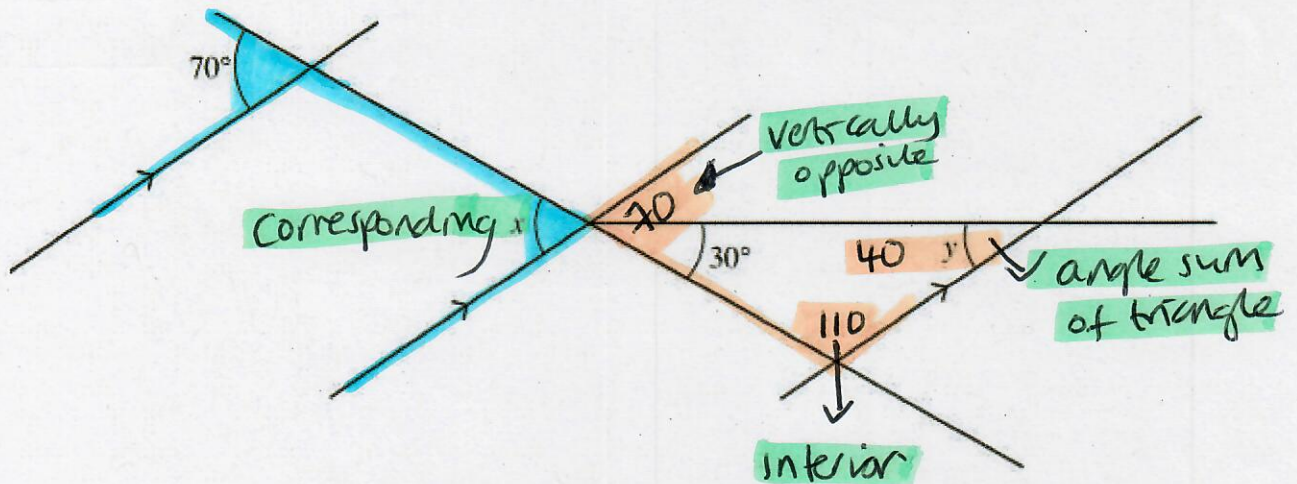


Diagram not drawn to scale.

Find the sizes of the angles marked x and y .

$x = 70^\circ$ $y = 40^\circ$

[3]

5. Calculate the size of each of the angles marked x , y and z in the diagram below.

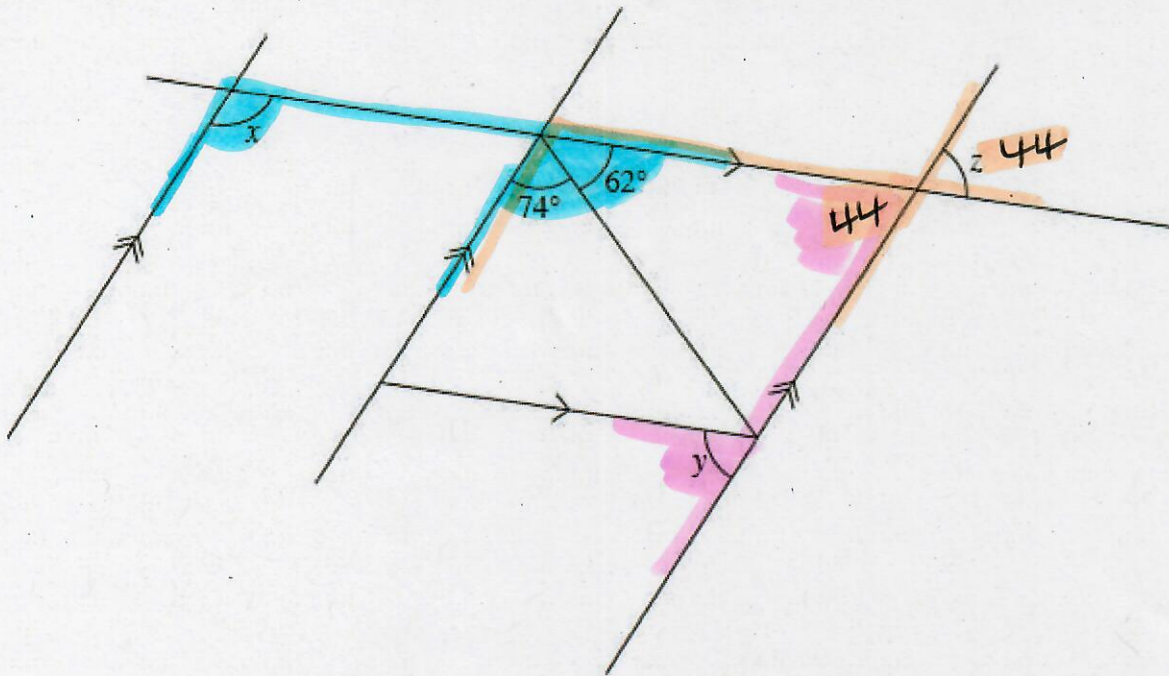


Diagram not drawn to scale.

Corresponding $\rightarrow x = 62 + 74 = 136$

$x = \underline{\underline{136^\circ}}$

Interior & corresponding

$y = \underline{\underline{44^\circ}}$

Interior & vertically opposite

$z = \underline{\underline{44^\circ}}$

[4]

6. Calculate the size of each of the angles marked x , y and z in the diagram below.

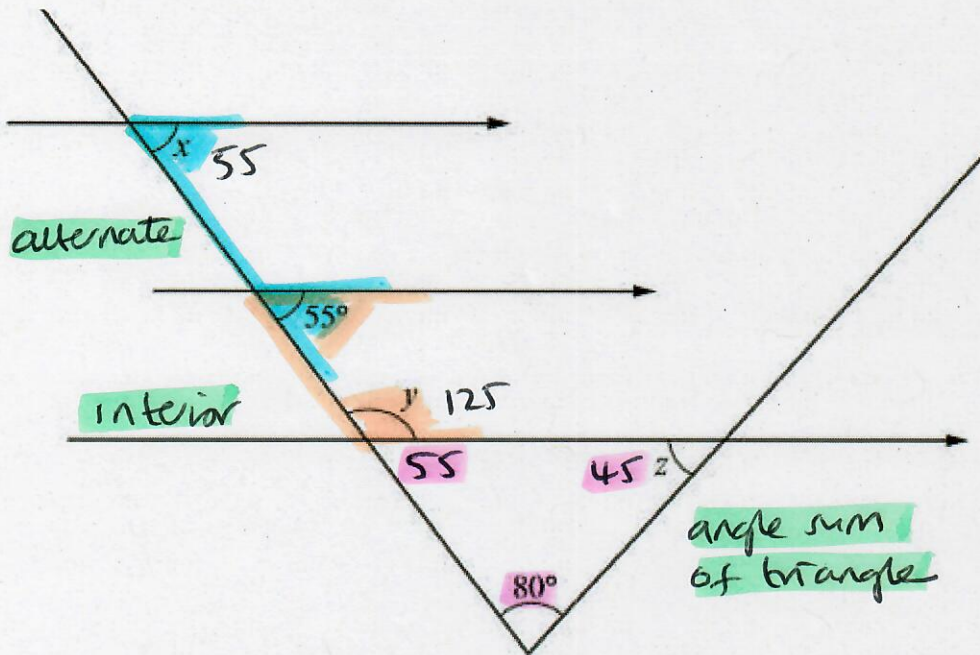


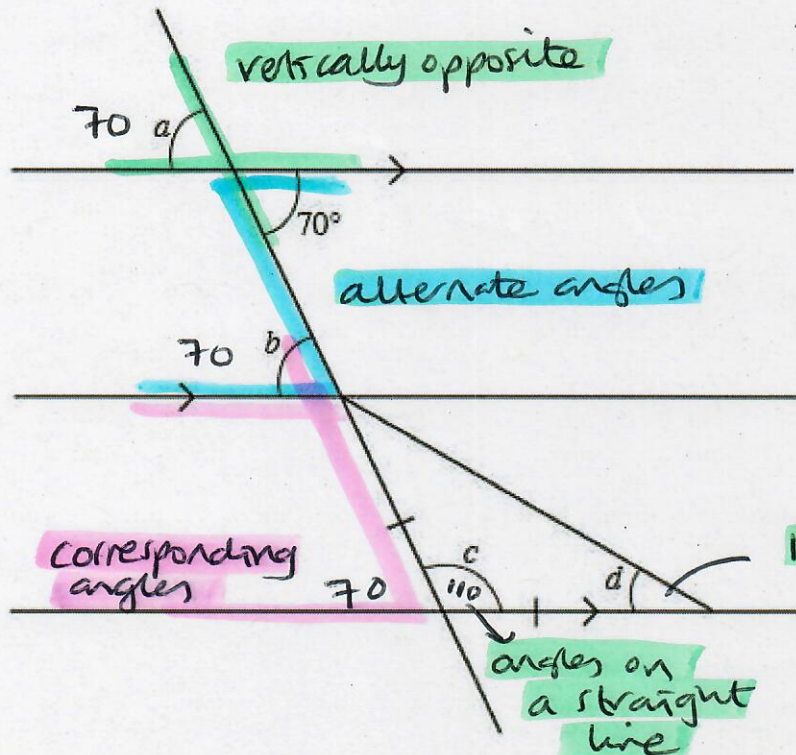
Diagram not drawn to scale

$x = \underline{\underline{55}}^\circ$ $y = \underline{\underline{125}}^\circ$ $z = \underline{\underline{45}}^\circ$

[4]

7.

The diagram shows three parallel lines and another line that crosses the parallel lines. Find the angles marked a , b , c and d .



isosceles triangle

$$d = \frac{180 - 110}{2} = 35$$

$a = \underline{\underline{70^\circ}}$ $b = \underline{\underline{70^\circ}}$ $c = \underline{\underline{110^\circ}}$ $d = \underline{\underline{35^\circ}}$

[4]

8.

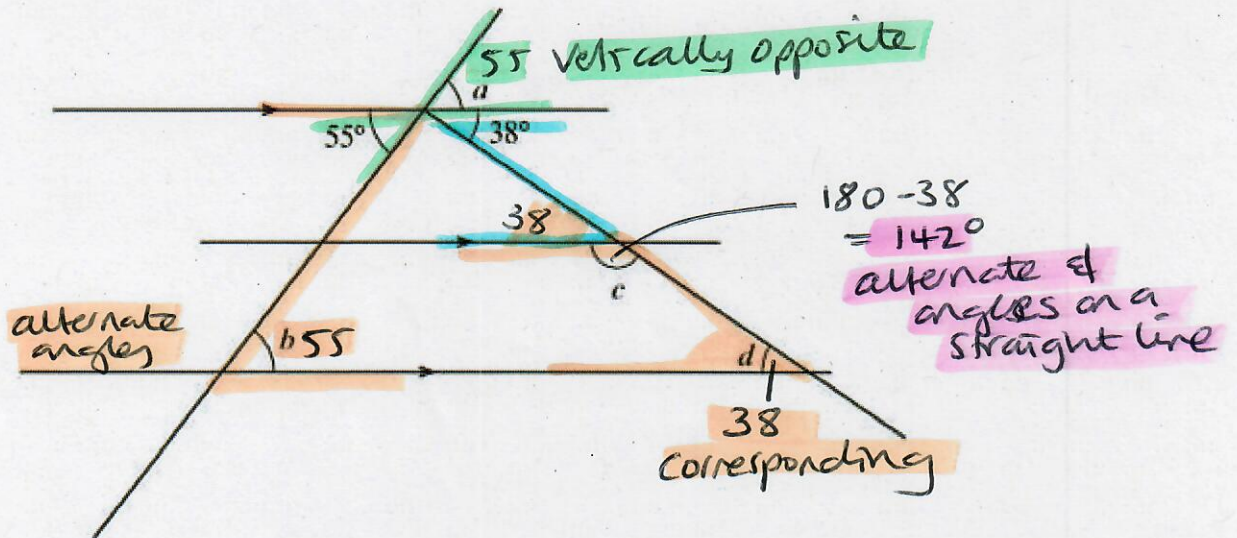


Diagram not drawn to scale

Find the size of each of the angles marked a , b , c and d .

$a = \underline{\underline{55}}^\circ$
 $b = \underline{\underline{55}}^\circ$
 $c = \underline{\underline{142}}^\circ$
 $d = \underline{\underline{38}}^\circ$

[4]

9.

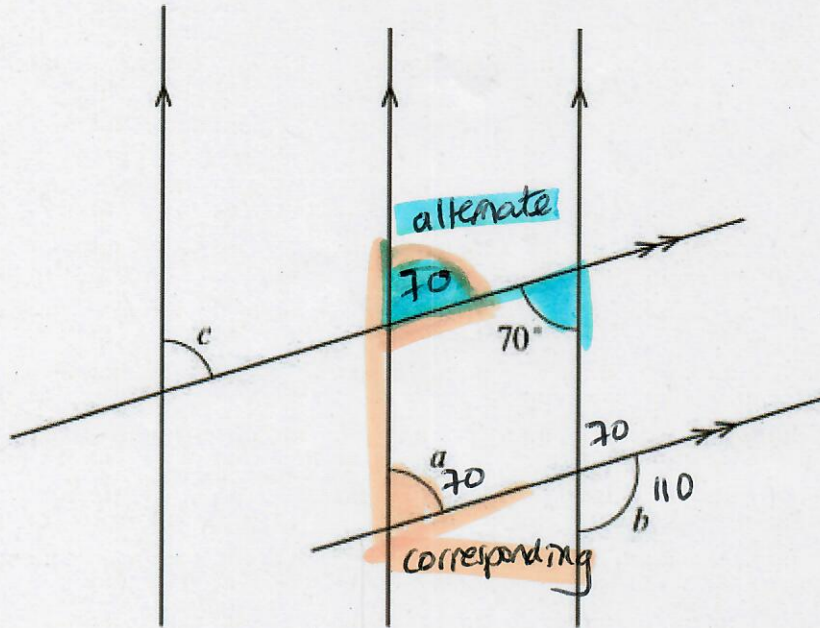


Diagram not drawn to scale

Find the size of each of the angles marked a , b and c .

$$a = \underline{70}^{\circ} \quad b = \underline{110}^{\circ} \quad c = \underline{70}^{\circ}$$

[3]

10.

Calculate the size of each of the angles marked x , y and z in the diagram below.

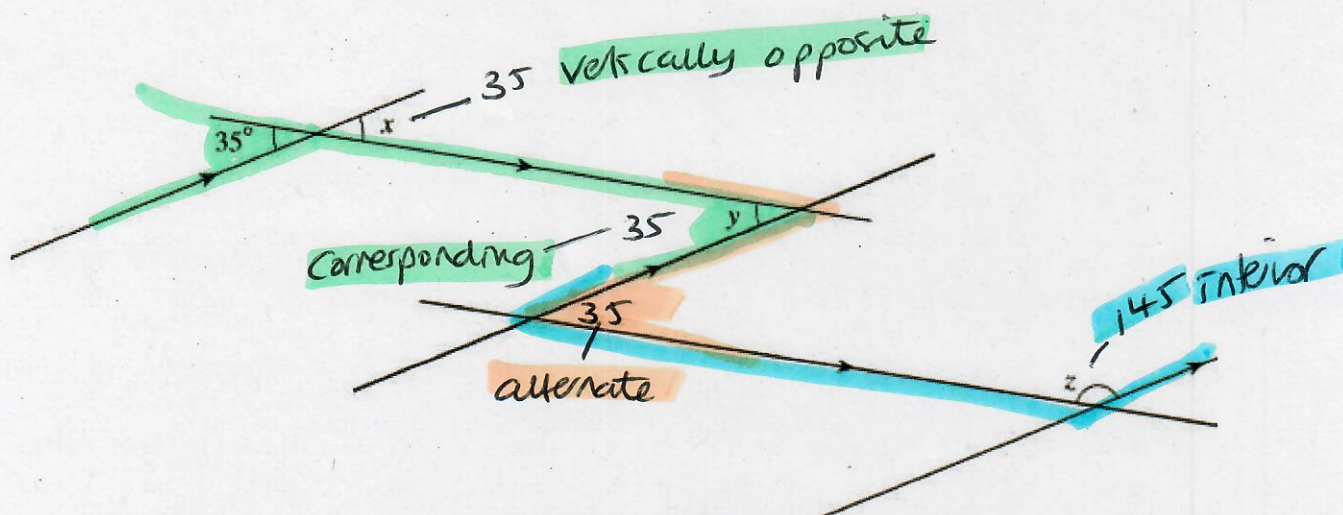


Diagram not drawn to scale.

$$x = \underline{\underline{35}}^\circ \quad y = \underline{\underline{35}}^\circ \quad z = \underline{\underline{145}}^\circ$$

[3]

11.

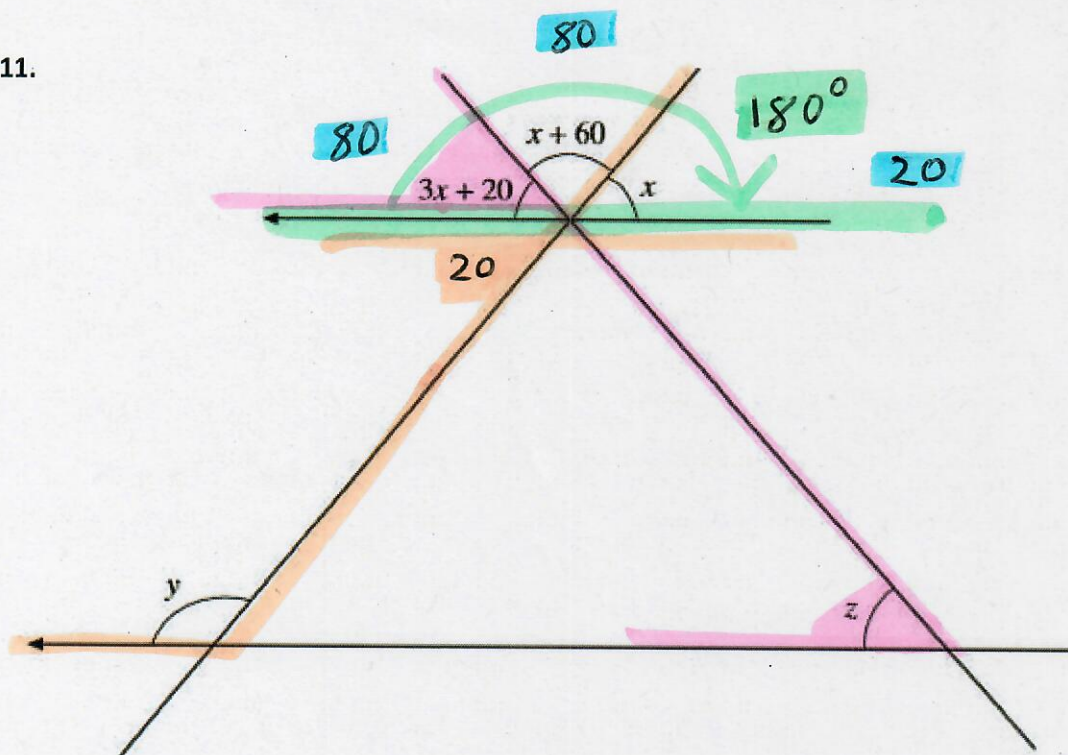


Diagram not drawn to scale.

All angles are measured in degrees.
Find the size of angles x , y and z .

$$3x + 20 + x + 60 + x = 180^\circ$$

$$5x + 80 = 180^\circ$$

$$5x = 100^\circ$$

$$x = 20^\circ$$

$$y + 20^\circ = 180^\circ \text{ interior angles}$$

$$y = 160^\circ$$

$$z = 3x + 20 \text{ corresponding}$$

$$z = 80^\circ$$

$$x = 20^\circ, y = 160^\circ, z = 80^\circ$$

[5]