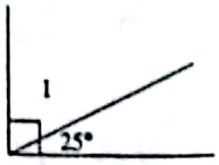
INTERSECTING LINES

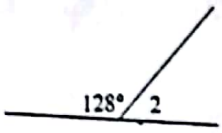
Find the measure of each required angle and give the reason for your answer.

1.



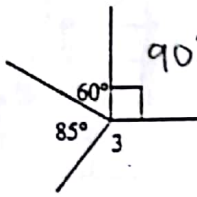
∠1 = 65° comp ∠s.

2.



∠2 = 52° ∠s on a line

3.



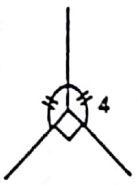
360 - 60 - 85
-90
= 360 - 235

∠3 = 125° ∠s on a pt

4.

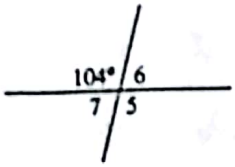
360 - 90 = 270

$\frac{270}{2} = 135°$



∠4 = 135° ∠s on a pt

5.

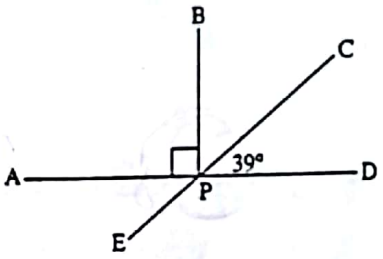


∠5 = 104° VERT OPP

∠6 = 76° ∠s on a line

∠7 = 76° vert opp

6.

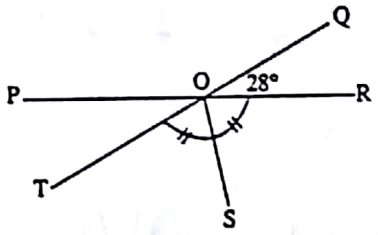


∠BPD = 90° ∠s on a line

∠BPC = 51° comp ∠s

∠APE = 39° vert opp

7.



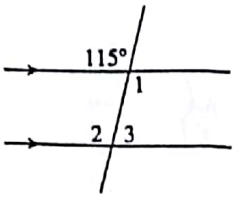
∠POT = 28° VERT OPP

∠POQ = 152° ∠s on a line

∠ROT = 152° VERT OPP

∠ROS = 76° half of ∠ROT

8.

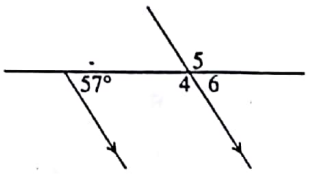


∠1 = 115° VERT OPP

∠2 = 115° alt int ∠s ≅ 2

∠3 = 65° int ∠s ≅ 1

9.

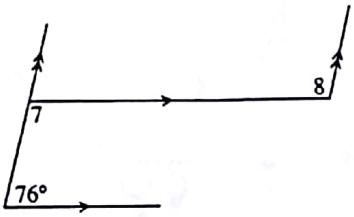


∠4 = 123° int ∠s ≅ 57°

∠5 = 123° VERT OPP ≅ ∠4

∠6 = 57° CORR ∠s

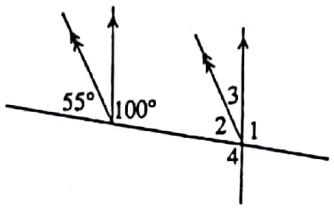
10.



∠7 = 104° int ∠s ≅ 76°

∠8 = 104° alt int ∠s ≅ ∠7

11.



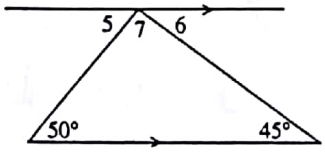
∠1 = 100° corr ∠s

∠2 = 55° corr ∠s

∠3 = 25° ∠s on a line

∠4 = 100° vert opp ∠1

12.

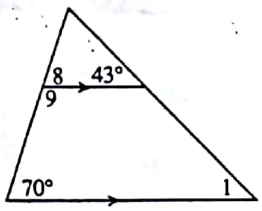


∠5 = 50° alt int ∠s

∠6 = 45° alt int ∠s

∠7 = 85° ∠s in Δ

13.

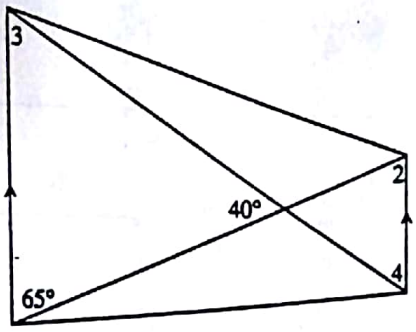


∠8 = 70° CORR ∠s

∠9 = 110° int ∠s

∠1 = 43° CORR ∠s

14.

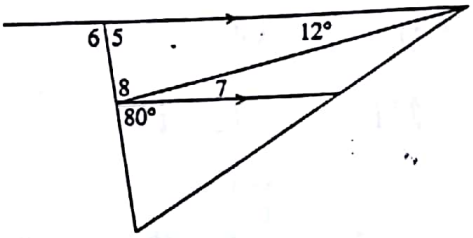


∠2 = 65° alt int ∠s

∠3 = 75° ∠s in a △

∠4 = 75° alt int ∠s

15.



∠5 = 80° corr ∠s

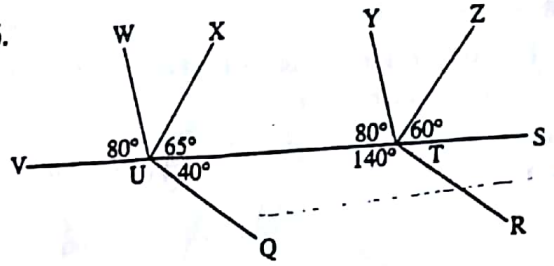
∠6 = 100° ∠s on a line

∠7 = 12° alt int ∠s

∠8 = 88° ∠s on a line

Name 2 pairs of parallel segments in each figure. State the reason for your answer.

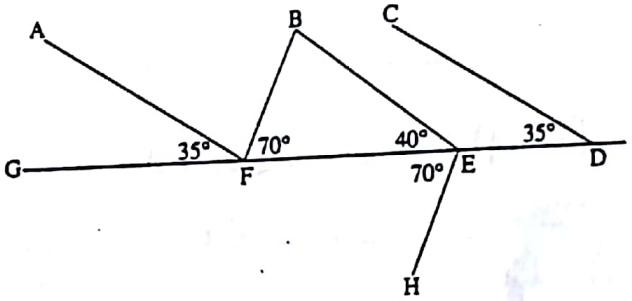
16.



UW ∥ TY corr ∠s are equal.

VQ ∥ TR int ∠s are supp

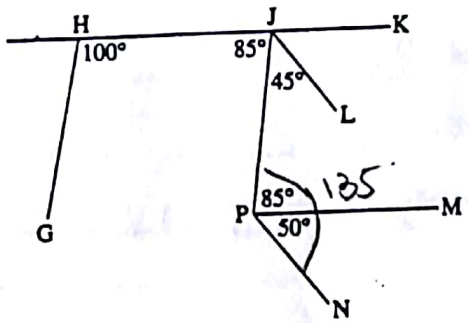
17.



AF ∥ CD corr ∠s equal

BF ∥ EH alt int ∠s are equal

18.



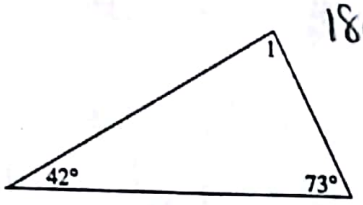
HJ ∥ PM alt int ∠s =

JL ∥ PN int ∠s are supp

TRIANGLES

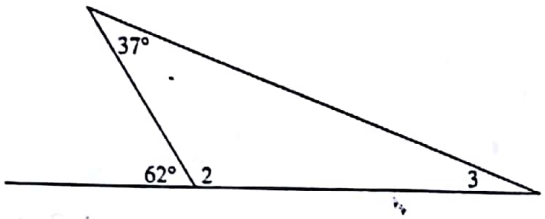
Find the measure of each required angle and give the reason for your answer.

1. 180 − 115 = 65



∠1 = 65° ∠s in a Δ

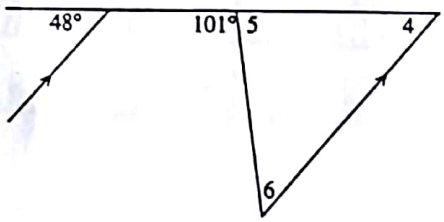
2.



∠2 = 118° ∠s on a line

∠3 = 25° ∠s in Δ

3.



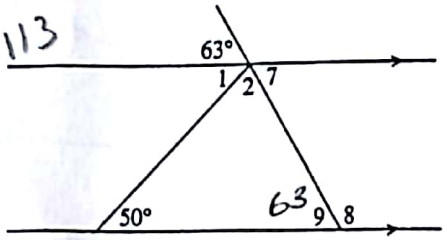
∠4 = 48° corr ∠s

∠5 = 79° ∠s on a line

∠6 = 53° ∠s in Δ

180 − 127

4. 180 − 113



∠7 = 63° vert opp

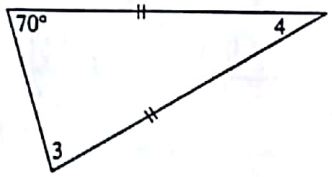
∠8 = 117° int ∠s w/ ∠7

∠9 = 63° alt int ∠s w/ ∠7

∠1 = 50° alt int ∠s

∠2 = 67° ∠s in Δ

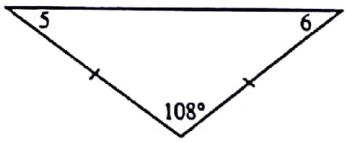
5.



∠3 = 70° ISOS Δ

∠4 = 40° ∠s in Δ

6.

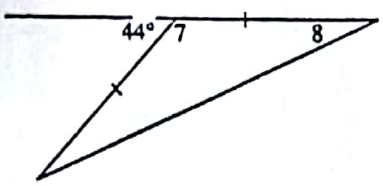


∠5 = 36° ISOS Δ

∠6 = 36° ∠s in Δ

$\frac{72}{2} = 36$

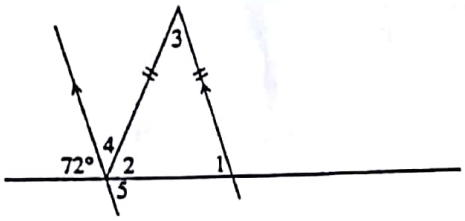
7.



∠7 = 136° Ls on line

∠8 = 22° ISOS Δ

8.



∠1 = 72° corr. Ls

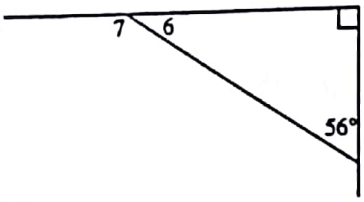
∠2 = 72° ISOS Δ

∠3 = 36° Ls in Δ

∠4 = 36° alt int ≅ ∠3

∠5 = 72° alt int ≅ ∠1

9.

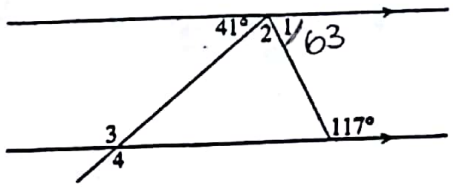


180
−146
34

∠6 = 34° Ls in Δ

∠7 = 146° Ls on line.

10.



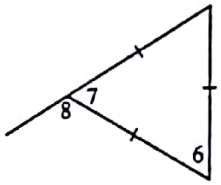
∠1 = 63° int. Ls

∠2 = 76° Ls on a line

∠3 = 139° int Ls ≅ 41°

∠4 = 139° vert opp.

11.

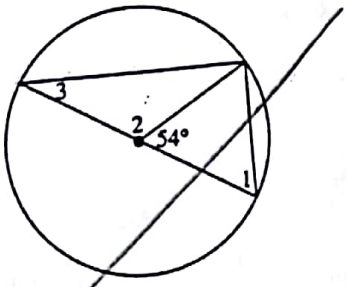


∠6 = 60° equil. Δ

∠7 = 60° equil Δ

∠8 = 120° Ls on a line

12.



∠1 = ___

∠2 = ___

∠3 = ___

omit