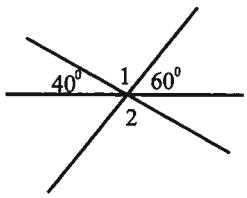
2.1 Exercise Set

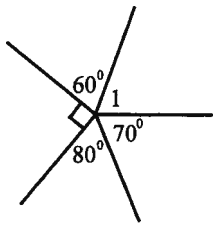
1.



∠1 = _____ _____

∠2 = _____ _____

2.



∠1 = _____ _____

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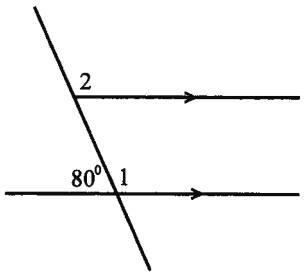

∠1 = _____ _____

∠2 = _____ _____

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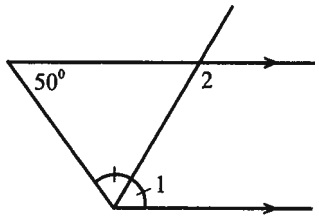
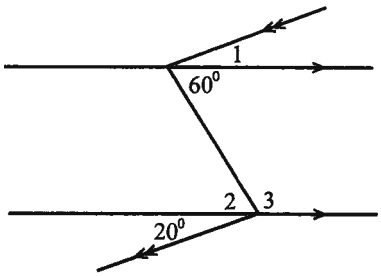


∠1 = _____ _____

∠2 = _____ _____

5.

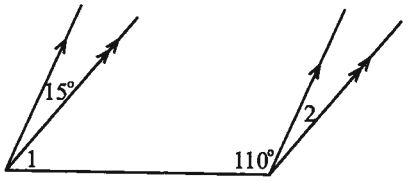


∠1 = _____ _____

∠2 = _____ _____

∠3 = _____ _____

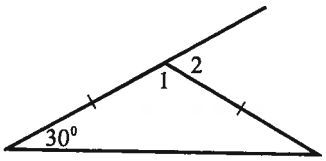
6.



$\angle 1 =$ _____ _____

$\angle 2 =$ _____ _____

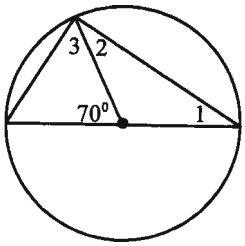
7.



$\angle 1 =$ _____ _____

$\angle 2 =$ _____ _____

8.

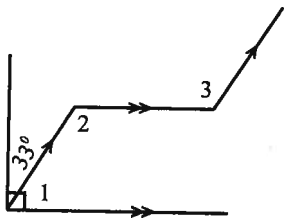


$\angle 1 =$ _____ _____

$\angle 2 =$ _____ _____

$\angle 3 =$ _____ _____

9.

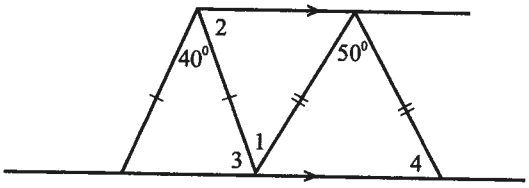


$\angle 1 =$ _____ _____

$\angle 2 =$ _____ _____

$\angle 3 =$ _____ _____

10.



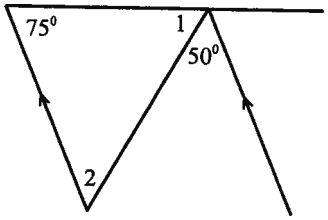
$\angle 1 =$ _____ _____

$\angle 2 =$ _____ _____

$\angle 3 =$ _____ _____

$\angle 4 =$ _____ _____

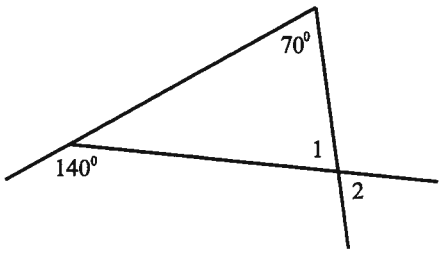
11.



$\angle 1 =$ _____ _____

$\angle 2 =$ _____ _____

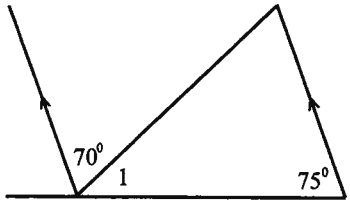
12.



$\angle 1 =$ _____ _____

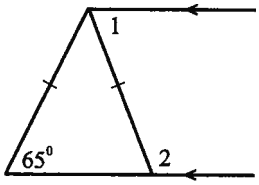
$\angle 2 =$ _____ _____

13.



$\angle 1 =$ _____ _____

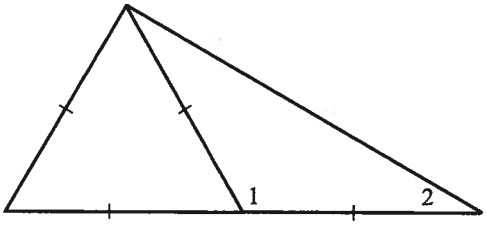
14.



$\angle 1 =$ _____ _____

$\angle 2 =$ _____ _____

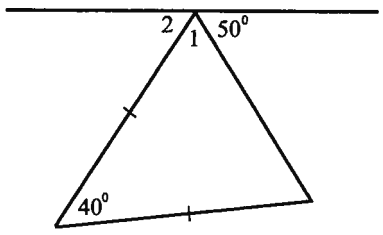
15.



$\angle 1 =$ _____ _____

$\angle 2 =$ _____ _____

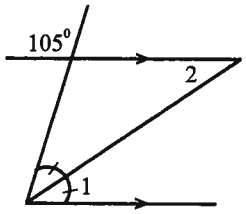
16.



$\angle 1 =$ _____ _____

$\angle 2 =$ _____ _____

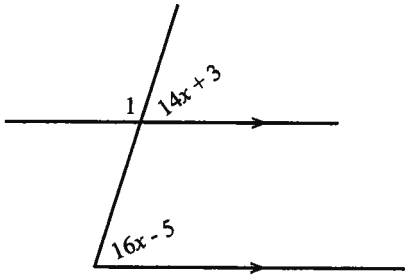
17.



$\angle 1 =$ _____ _____

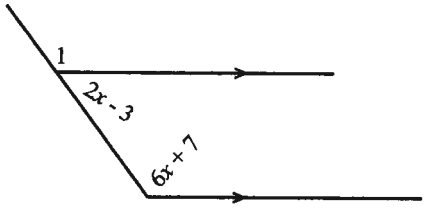
$\angle 2 =$ _____ _____

18.



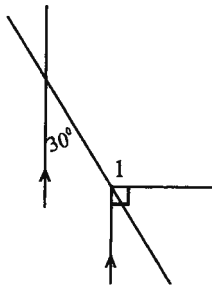
$\angle 1 =$ _____ _____

19.



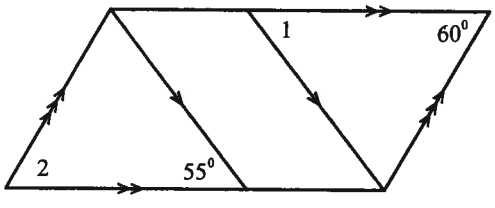
$\angle 1 =$ _____ _____

20.



$\angle 1 =$ _____ _____

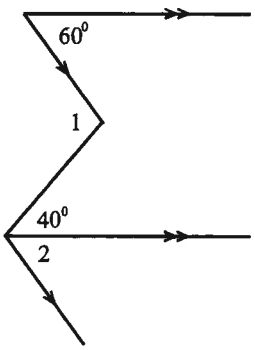
21.



$\angle 1 =$ _____ _____

$\angle 2 =$ _____ _____

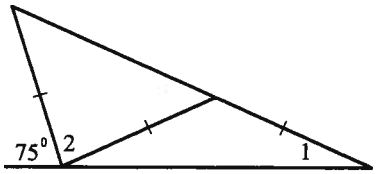
22.



$\angle 1 =$ _____ _____

$\angle 2 =$ _____ _____

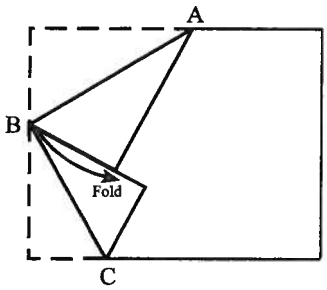
23.



$\angle 1 =$ _____ _____

$\angle 2 =$ _____ _____

24.



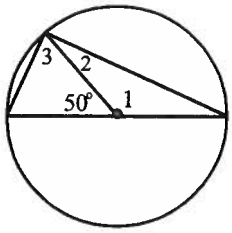
Fold a piece of paper twice such that the folds meet. What is $\angle ABC$ of the fold? Why?

25.

$\angle 1 =$ _____ _____

$\angle 2 =$ _____ _____

26.

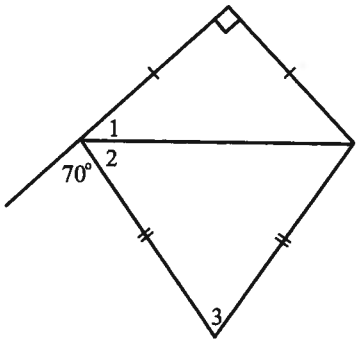


$\angle 1 =$ _____ _____

$\angle 2 =$ _____ _____

$\angle 3 =$ _____ _____

27.

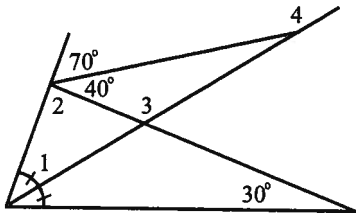


$\angle 1 =$ _____ _____

$\angle 2 =$ _____ _____

$\angle 3 =$ _____ _____

28.



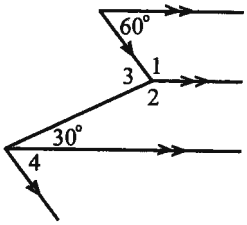
$\angle 1 =$ _____ _____

$\angle 2 =$ _____ _____

$\angle 3 =$ _____ _____

$\angle 4 =$ _____ _____

29.



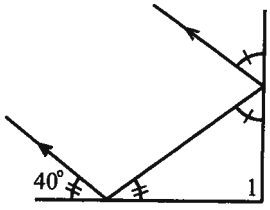
$\angle 1 =$ _____ _____

$\angle 2 =$ _____ _____

$\angle 3 =$ _____ _____

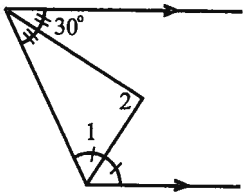
$\angle 4 =$ _____ _____

30.



$\angle 1 =$ _____ _____

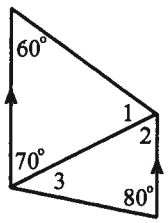
31.



$\angle 1 =$ _____ _____

$\angle 2 =$ _____ _____

32.

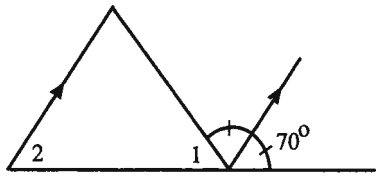


$\angle 1 =$ _____ _____

$\angle 2 =$ _____ _____

$\angle 3 =$ _____ _____

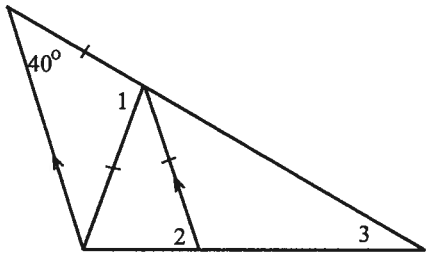
33.



$\angle 1 =$ _____ _____

$\angle 2 =$ _____ _____

34.

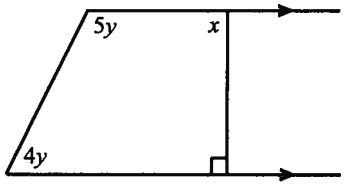


$\angle 1 =$ _____ _____

$\angle 2 =$ _____ _____

$\angle 3 =$ _____ _____

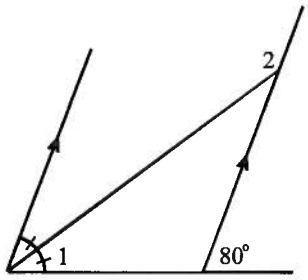
35.



$x =$ _____ _____

$y =$ _____ _____

36.



$\angle 1 =$ _____ _____

$\angle 2 =$ _____ _____

2.1 Exercise Set (Reason answers may vary)

1. $\angle 1 = 80°$ angles on a line add to 180°; $\angle 2 = 80°$ vertical angles
2. $\angle 1 = 60°$ angles at a point add to 360°
3. $\angle 1 = 100°$ supplementary angles; $\angle 2 = 100°$ corresponding angles
4. $\angle 1 = 65°$ co-interior angle plus angle bisector; $\angle 2 = 115°$ co-interior angles
5. $\angle 1 = 20°$ alternate interior angles; $\angle 2 = 60°$ alternate interior angles; $\angle 3 = 120°$ co-interior angles
6. $\angle 1 = 55°$ co-interior angles; $\angle 2 = 15°$ co-interior angles
7. $\angle 1 = 120°$ sum of angles in a triangle; $\angle 2 = 60°$ supplementary angles
8. $\angle 1 = 35°$ supplementary angles plus sum of angles in a triangle; $\angle 2 = 35°$ isosceles triangle; $\angle 3 = 55°$ sum of angles in a triangle
9. $\angle 1 = 57°$ complementary angles; $\angle 2 = 123°$ co-interior angles; $\angle 3 = 123°$ alternate interior angles
10. $\angle 1 = 45°$ angles on a line; $\angle 2 = 70°$ alternate interior angles; $\angle 3 = 70°$ isosceles triangle; $\angle 4 = 65°$ isosceles triangle
11. $\angle 1 = 55°$ angles in a triangle; $\angle 2 = 50°$ alternate interior angles
12. $\angle 1 = 70°$ supplementary angles plus sum of angles in a triangle; $\angle 2 = 70°$ vertical angles
13. $\angle 1 = 35°$ co-interior angles
14. $\angle 1 = 65°$ alternate interior angles; $\angle 2 = 115°$ supplementary angles
15. $\angle 1 = 120°$ equilateral triangle plus supplementary angles; $\angle 2 = 30°$ isosceles triangle
16. $\angle 1 = 70°$ isosceles triangle; $\angle 2 = 60°$ angles on a line
17. $\angle 1 = 37\frac{1}{2}°$ vertical angles plus co-interior angles; $\angle 2 = 37\frac{1}{2}°$ alternate interior angles
18. $\angle 1 = 121°$ corresponding angles plus supplementary angles
19. $\angle 1 = 139°$ co-interior angles plus supplementary angles
20. $\angle 1 = 120°$ supplementary angles
21. $\angle 1 = 55°$ corresponding angles; $\angle 2 = 60°$ co-interior angles
22. $\angle 1 = 100°$ alternate interior angles; $\angle 2 = 60°$ alternate interior angles
23. $\angle 1 = 25°$ sum of angles in a triangle; $\angle 2 = 80°$ angles on a line
24. $\angle 1 = 90°$ sum of angles on a line plus angle bisector
25. $\angle 1 = 55°$ sum of angles in a triangle and angle bisector; $\angle 2 = 80°$ sum of angles in a triangle
26. $\angle 1 = 130°$ supplementary angles; $\angle 2 = 25°$ isosceles triangle; $\angle 3 = 65°$ isosceles triangle
27. $\angle 1 = 45°$ isosceles right triangle; $\angle 2 =$ angles on a line; $\angle 3 = 50°$ sum of angles in a triangle
28. $\angle 1 = 40°$ sum of angles in a triangle and angle bisector; $\angle 2 = 70°$ angles on a line; $\angle 3 = 110°$ sum of angles in a triangle plus vertical angles; $\angle 4 = 150°$ supplementary angles

29. $\angle 1 = 120°$ co-interior angles; $\angle 2 = 150°$ co-interior angles; $\angle 3 = 90°$ angles at a point; $\angle 4 = 60°$ alternate interior angles plus complementary angles

30. $\angle 1 = 90°$ angles on a line, co-interior angles, and sum of angles in a triangle plus sum of angles in a triangle; $\angle 2 = 90°$ sum of angles in a triangle

31. $\angle 1 = 60°$ co-interior angles plus angle bisector; $\angle 2 = 90°$ sum of angles in a triangle

32. $\angle 1 = 50°$ sum of angles in a triangle; $\angle 2 = 70°$ alternate interior angles; $\angle 3 = 30°$ co-interior angles or sum of angles in a triangle

33. $\angle 1 = 40°$ angle bisector plus angles on a line; $\angle 2 = 70°$ corresponding angles

34. $\angle 1 = 100°$ isosceles triangle and sum of angles in a triangle; $\angle 2 = 70°$ alternate interior angles plus isosceles triangle; $\angle 3 = 30°$ sum of angles in a triangle

35. $x = 90°$ co-interior angles; $y = 20°$ co-interior angles

36. $\angle 1 = 40°$ angle bisector plus corresponding angles; $\angle 2 = 140°$ alternate interior angles plus supplementary angles

37. a) Equal angles would be 60° each, therefore lines are not parallel.

b) Parallel lines cannot have different corresponding angles. 61°/23° should be 62°/22° or 62°/22° should be 61°/23°.

c) If lines are parallel, then 88° should be 90°.

d) If lines are parallel, then 100° should be 90°.

e) If perpendicular, then 44° should be 45°.

f) If angles are bisected, then 124° should be 125° or 70° should be 68°.

g) If lines are parallel, then 45° should be 40° or 120° should be 125°.

h) If angles are bisected, then 116° should be 115° or 50° should be 52°.