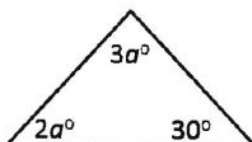**SATPREP**

Assignment : *Triangle*
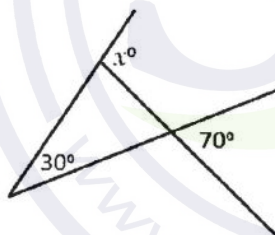
Easy

Note: Figure not drawn to scale.

1. Based on the figure above, what is the value of a?
   a) 25
   b) 30
   c) 35
   d) 40

2. In a triangle, one angle is double the size of another angle. If the measure of the third angle is 30 degrees, what is the measure of the largest angle in degrees?
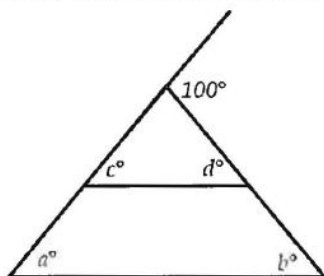   a) 70°
   b) 80°
   c) 90°
   d) 100°
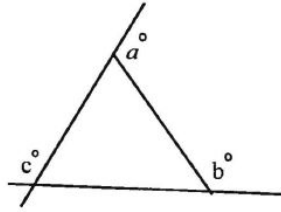
3. In the figure below, what is the value of x?

   a) 80
   b) 100
   c) 120
   d) 130

4. In the figure below, what is the value of $a + b + c + d$?
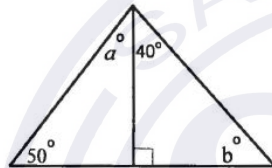
5. In the figure below, $c = 150$. What is the value of $a + b$?

    a) 140
    b) 180
    c) 210
    d) 240

6. In the figure below, what is the value of $2a - b$?
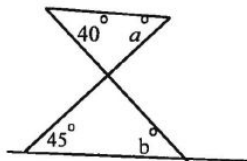

    a) 10
    b) 15
    c) 20
    d) 30

7. In the figure below, if $a = 3c$, and $b = 2a$, what is the value of c?

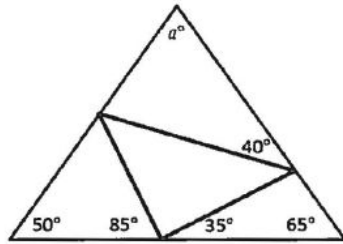Note: Figure not drawn to scale.

    a) 18
    b) 20
    c) 28
    d) 34

8. In the figure below, what is the value of $a - b$?
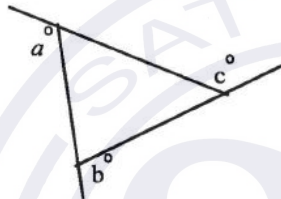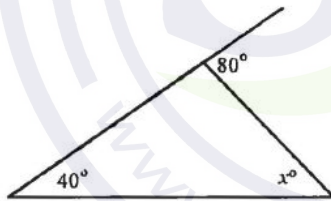
9. In the figure below, what is the value of *a*?

Note: Figure not drawn to scale.

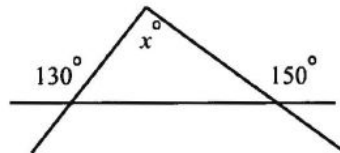10. In the figure below, what is the sum of *a*, *b* and *c*?

a) 90
b) 180
c) 270
d) 360

11. In the triangle above, what is the value of *x*?
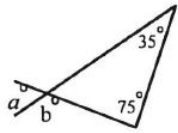a) 30
b) 40
c) 50
d) 60

12. In the figure below, what is the value of *x*?

a) 50
b) 70
c) 90
d) 100

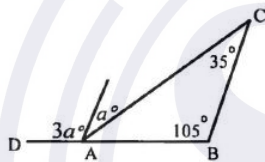13. In the figure below, what is the value of $a + 2b$?

Note: Figure not drawn to scale.

   a) 250
   b) 260
   c) 290
   d) 300

Medium

14. In the figure below shows $\triangle ABC$ and its exterior angle $\angle DAC$. What is the value of a?


15. The three interior angle measures of a triangle have the ratio $3 : 4 : 5$. What is the sum of the measures, in degrees, of the smallest and largest angles?
   a) 100°
   b) 110°
   c) 120°
   d) 140°

16. The three angles of a triangle have measures $x°$, $2x°$, and $4y°$, where $x > 56$. If x and y are integers, what is one possible value of y?

17. In the figure below, what is the value of x?
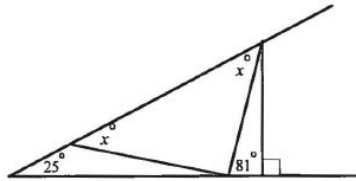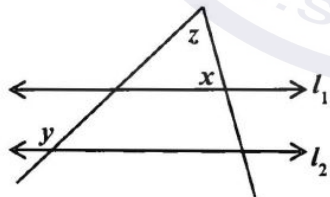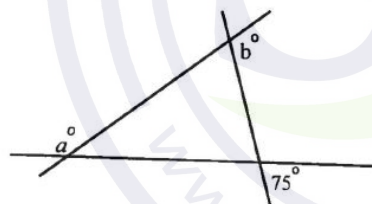

Note: Figure not drawn to scale.

18. In the figure below, what is the value of a?
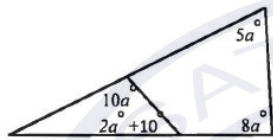
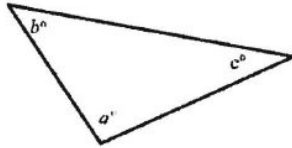
Note: Figure not drawn to scale.

a) 25
b) 20
c) 15
d) 10

19. In the figure below, what is the value of $a + b$?

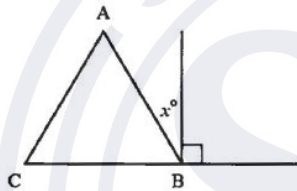20. In the figure above, if $l_1 \parallel l_2$, what does z equal in terms of x and y? 🔄
a) $180° - x - y$
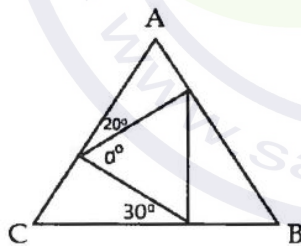b) $180° - y + x$
c) $y - x$
d) $x - y$

Hard

Note: Figure not drawn to scale.

21. In the triangle above, $a + b = 100$, and $b + c = 150$. What is the value of b?
    a) 40
    b) 50
    c) 70
    d) 80
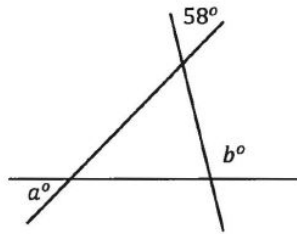

22. In the figure above, $\triangle ABC$ is an isosceles triangle and $m\angle A = 60°$. What is the value of x?

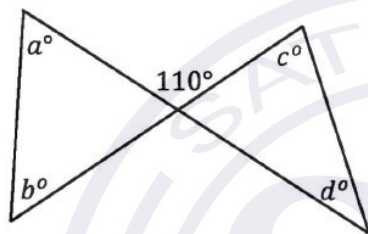
Note: Figure not drawn to scale.

23. In the figure above, $\triangle ABC$ is an equilateral triangle. What is the value of a?
    a) 70°
    b) 60°
    c) 50°
    d) 40°

24. In the figure below, what is $b - a$?
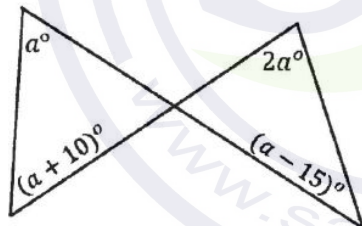

25. In the figure below, what is $a + b - c - d$?

Note: Figure not drawn to scale.

26. In the figure below, what is the value of a?

Note: Figure not drawn to scale.