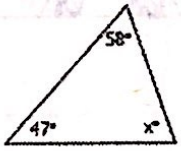
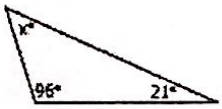
Day 3: Triangle Sum Theorem and Isosceles Triangle Theorem (ITT)

I. Find the value of "x".

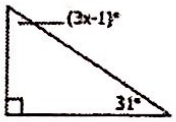
1) x = 75



2) x = 63



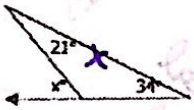
3) x = 20



59 = 3x - 1

x =

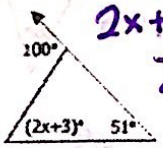
4) x = 55



5) x = 13

2x + 3 + 51 = 100

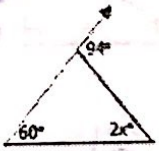
2x = 46



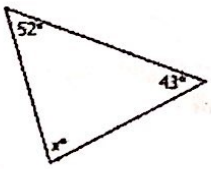
6) x = 17

60 + 2x = 94

2x = 34

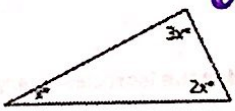


7) x = 85



8) x = 30

6x = 180



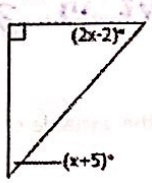
9) x = 29

90 + 2x - 2 + x + 5 = 180

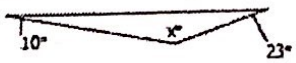
3x + 3 = 90

3x = 87

x = 29



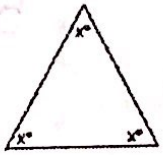
10) x = 147



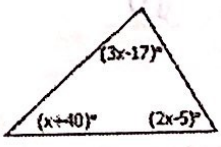
180 = 10 + x + 23

x = 147

11) x = 60



12) x = 27



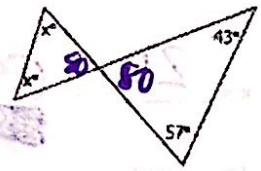
180 = 3x - 17 + x + 40 + 2x - 5

180 = 6x + 18

162 = 6x

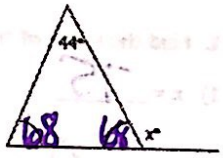
x = 27

13) x = 50



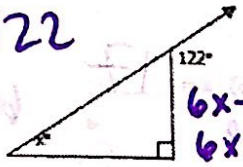
14) x = 50

15) x = 112

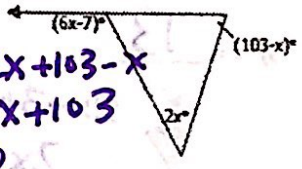


16) x = 32

$x + 90 = 122$



17) x = 22

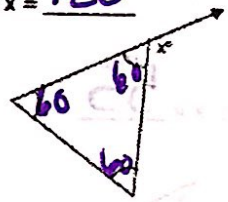


$6x - 7 = 2x + 103 - x$

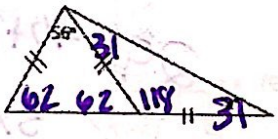
$6x - 7 = x + 103$

$5x = 110$

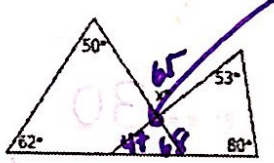
18) x = 120



19) x = 31



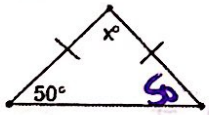
20) x = 65



vertical angles

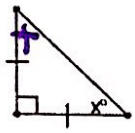
Find the value of the variable or question mark using the Isosceles Triangle Theorem

1.



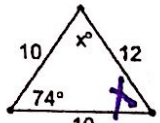
x = 80

2.



x = 45

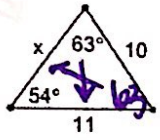
3.



$180 = 74 + 2x$

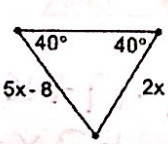
x = 53

4.



x = 11

5.

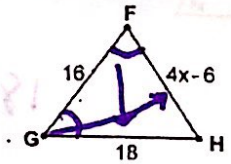


x = 5

$5x - 8 = 2x + 7$

$3x = 15$

6.



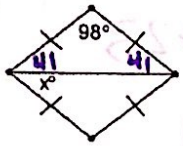
$\angle F \cong \angle G$

x = 6

$4x - 6 = 18$

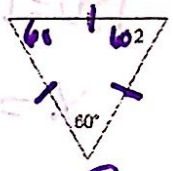
$4x = 24$

7.



x = 41

8. $m\angle 2 = 7x + 4$



x = 8

$7x + 4 = 60$

$x = 8$