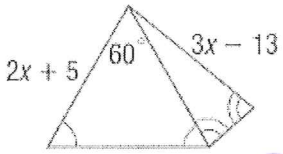
Name: Answers! No work- students must do that on own. :) Date: _____ Hour: _____

Isosceles and Equilateral Triangles- Homework

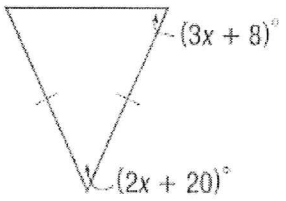
Directions: Show all work to find x. Circle your final answer.

1.



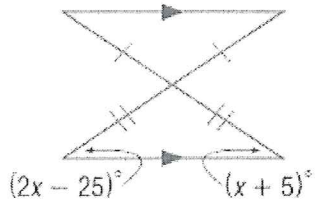
x = 18

2.



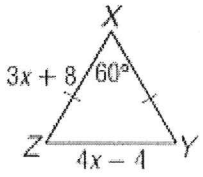
x = 18

3.



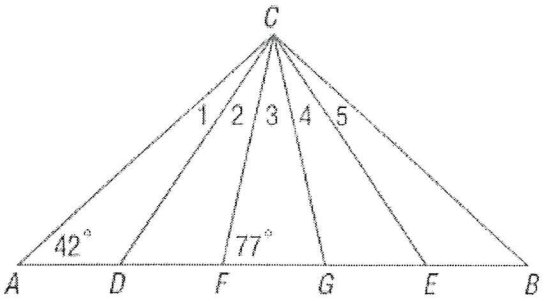
x = 30

4.



x = 12

5. **CHALLENGE** In the figure, $\triangle ABC$ is isosceles, $\triangle DCE$ is equilateral, and $\triangle FCG$ is isosceles. Find the measures of the five numbered angles at vertex C.



m<1 = 18°

m<2 = 17°

m<3 = 26°

m<4 = 17°

m<5 = 18°

Must mark + show work or Picture for credit

Name: _____ Date: _____ Hour: _____

Reading the question: Draw your figure before you solve. Find x and the measure of each side of the triangle.

6. $\triangle ABC$ is equilateral with $AB = 3x - 2$, $BC = 2x + 4$, and $CA = x + 10$.

$x = 6$

$AB = BC = CA = 16$

7. $\triangle DEF$ is isosceles, $\angle D$ is the vertex angle, $DE = x + 7$, $DF = 3x - 1$, and $EF = 2x + 5$.

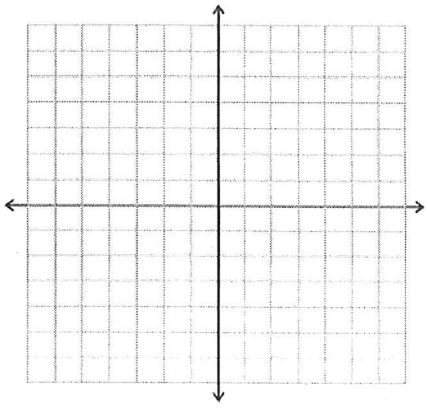
$x = 4$

$DE = DF = 11$

$EF = 13$

Find the measures of the sides of $\triangle RST$ and classify each triangle by its sides.

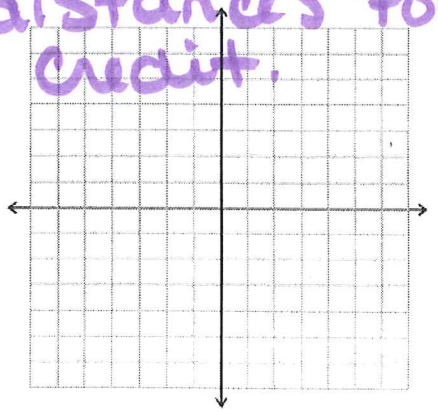
8. $R(0, 2)$, $S(2, 5)$, $T(4, 2)$



$\triangle RST$ is isosceles

9. $R(1, 3)$, $S(4, 7)$, $T(5, 4)$

students must show all distances for credit.



$\triangle RST$ is Scalene