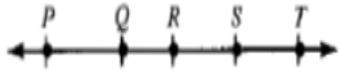
Geometry **Tune-Up #9**

Name _____

Date _____ Period _____

1. If $\overline{PR} \cong \overline{RT}$ and S is the midpoint of $\overline{RT}$, $QR = 4$, $ST = 5$, find PQ.



2. True or false:

a. *A, B, C* are coplanar

b. *A, B, C, F* are coplanar

c. $\overline{AC}$ intersects plane *M* at *C*

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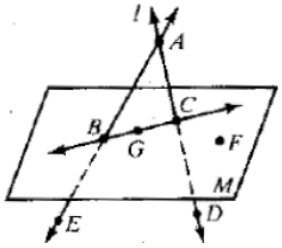


3. Consider this statement:
If $0 < m\angle 1 < 90$, then $\angle 1$ is acute.

a. Identify the hypothesis.

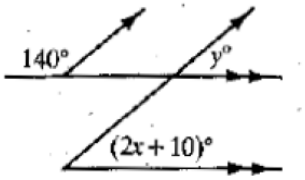
b. Identify the conclusion.

c. Write the converse

4. $\angle C$ and $\angle D$ are complementary angles. If $m\angle C = 3y + 5$ and $m\angle D = 2y + 10$, then $m\angle C$ = _____ .

5.

x = _____ *y* = _____



6. The lengths of the sides of an equilateral triangle are $4n$, $2n + 10$, and $7n - 15$. Find the length of a side.

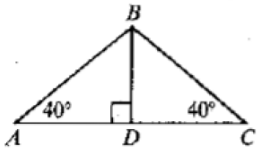
7. Find the measure of (a) each interior angle and (b) each exterior angle of a regular octagon.

8. The triangles shown are congruent: complete:

a. $\Delta ABD \cong$ _____

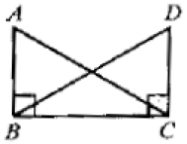
b. $\overline{AB} \cong$ _____

c. $\angle ABD \cong$ _____



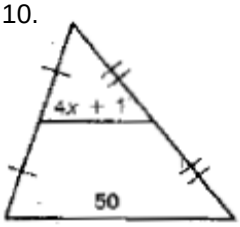
9. Given $AC = BD$; $\overline{AB} \perp \overline{BC}$; $\overline{BC} \perp \overline{DC}$

Prove $\Delta ABC \cong \Delta DCB$



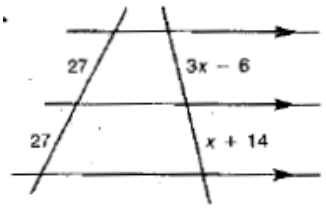
1. $AC = BD$, $\overline{AB} \perp \overline{BC}$, $\overline{BC} \perp \overline{DC}$	1. given
2. $\angle ABC$ and $\angle BCD$ are rt. $\angle$s	2.
3. ΔABC and ΔBCD are rt. Δs	3.
4. $BC = CB$	4.
5.	5.

10.



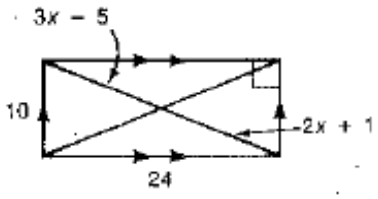
$x =$ _____

11.



$x =$ _____

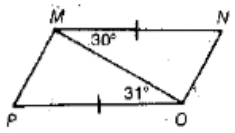
12.



$x =$ _____

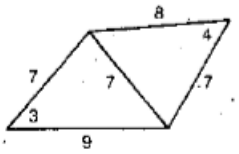
13.

Which is longer, $\overline{MP}$ or $\overline{NO}$? ___



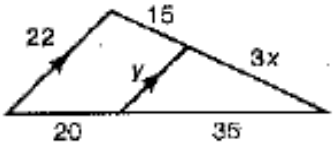
14.

Which is larger, $\angle 3$ or $\angle 4$? ___

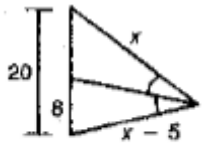


15. Is it possible for a triangle to have sides with lengths 6, 9, 15? Yes or no and show why or why not.

16. Find the values of x and y:

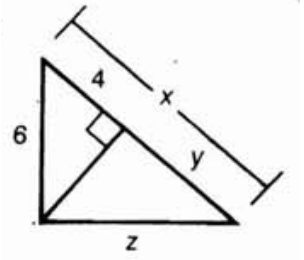


17.

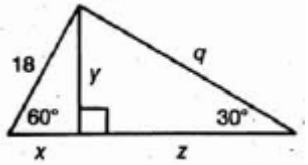


$x =$ _____

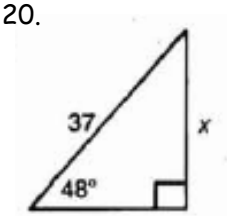
18. Find the values of x, y, and z:



19. Find the values of x, y, z, and q:

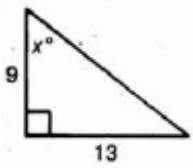


20.



$x =$ _____

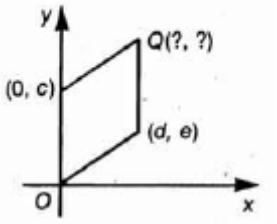
21.



$x =$ _____

22. Supply the missing coordinates without using any new variables.

Parallelogram



23. Given $A(2, -5)$ and $B(-2, 1)$.
Find the length of segment AB