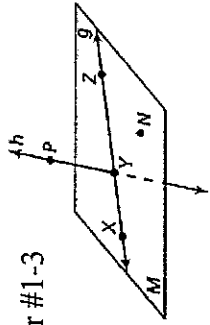


Chapter 1 Group Review

Use the diagram for #1-3



1. Give another name for plane M plane XNZ

2. Name a line intersecting the plane. $\overleftrightarrow{XY}$

3. Name a pair of opposite rays $\overrightarrow{YX}$, $\overrightarrow{YZ}$

4. Find XZ. Start with a letter equation.

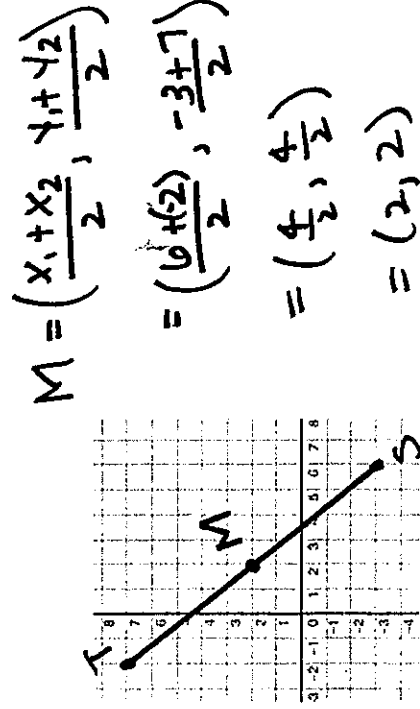


$$\begin{aligned} XY + YZ &= XZ \\ 17 + 24 &= XZ \end{aligned}$$

XZ = 41

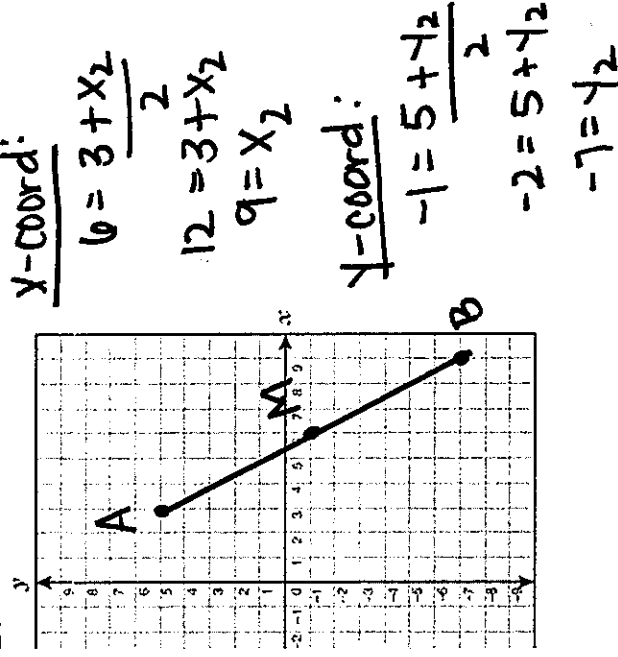
5. Find the coordinates of the midpoint, M, between S and T.

S(6, -3) and T(-2, 7)



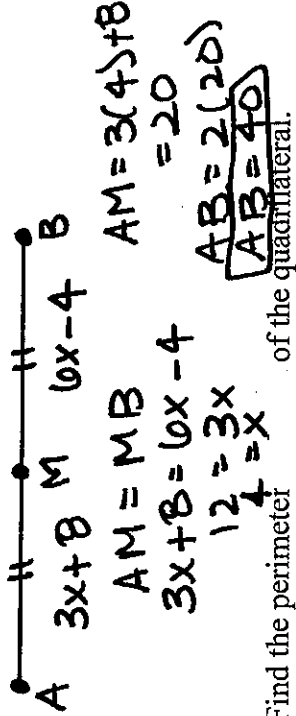
M is at (2 , 2)

6. The midpoint of $\overline{AB}$ is M(6, -1). One endpoint is A(3, 5). Find the coordinates of the other endpoint, B.



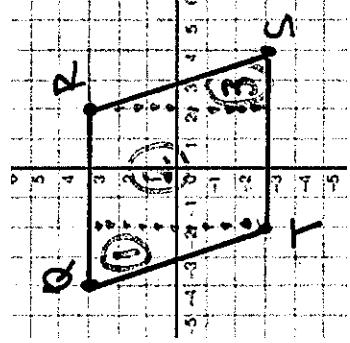
B is at (9 , -7)

7. Point M is the midpoint of $\overline{AB}$, where $AM = 3x + 8$ and $MB = 6x - 4$. Find AB. Draw a diagram.



8. Find the perimeter of the quadrilateral.

Q(-4, 3), R(2, 3), S(4, -3) and T(-2, -3)

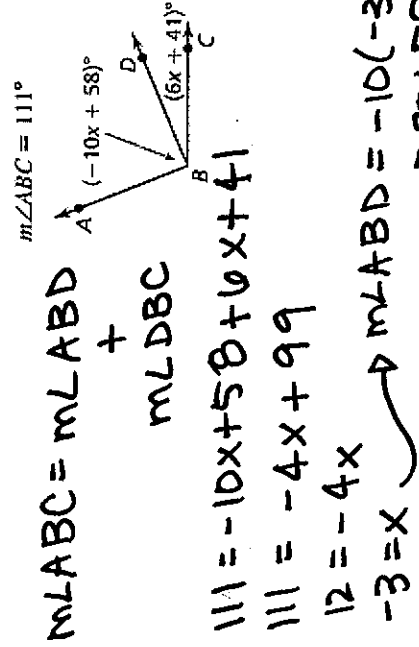


$$\begin{aligned} RS^2 &= 2^2 + 6^2 \\ RS^2 &= 4 + 36 \\ \sqrt{RS^2} &= \sqrt{40} \\ RS &= 2\sqrt{10} \end{aligned}$$

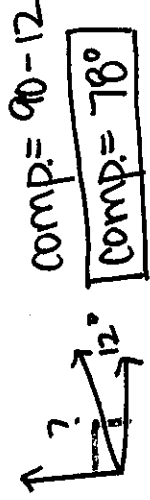
$$\begin{aligned} Per &= 6 + 6 + 2\sqrt{10} + 2\sqrt{10} \end{aligned}$$

Perimeter of QRST: 12 + 4√10

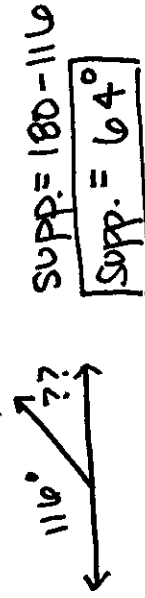
9. Find $m\angle ABD$ and $m\angle CBD$ if $m\angle ABC = 111^\circ$.



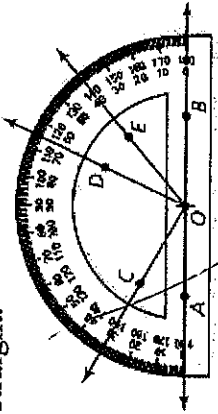
10. $\angle 1$ and $\angle 2$ are complementary angles. Given that $m\angle 1 = 12^\circ$, find $m\angle 2$.



11. $\angle 3$ and $\angle 4$ are supplementary angles. Given that $m\angle 3 = 116^\circ$, find $m\angle 4$.



12. Use the protractor to find the following angle measures. Then classify the angle as acute, right, obtuse, or straight.

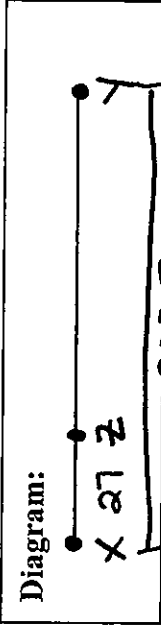


a) $m\angle AOC$

b) $m\angle EOD$

30°, acute 25°, acute

13. You travel from City X to City Y. You know that the round-trip distance is 647 miles. City Z, a city you pass on the way, is 27 miles from City X. Find the distance from City Z to City Y. Draw a diagram, and show all work.



Work:

Round-trip is 647 miles, so
one-way is $\frac{647}{2} = 323.5$

$$XZ + ZY = XY$$

$$27 + ZY = 323.5$$

$$ZY = 296.5$$

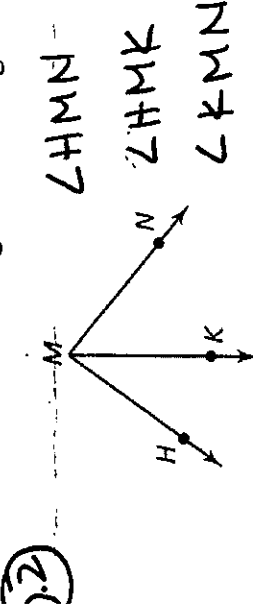
City Z is 296.5 miles from City Y.

14. The measure of an angle is 12° more than twice the measure of its complement. Find the measures of the each of the angles.

$$\begin{aligned} 2x + 12 &= 90 \\ 2x + 12 &= 90 \\ 2x &= 78 \\ x &= 39 \end{aligned}$$

One angle is 20° , the other is 64°

15. Name 3 different angles in the diagram.



For #16-19, Use the diagram.

16. Identify all angles that make a linear pair with $\angle 1$.

$\angle 5$

17. Identify all angles that make a linear pair with $\angle 7$.

$\angle 6, \angle 8$

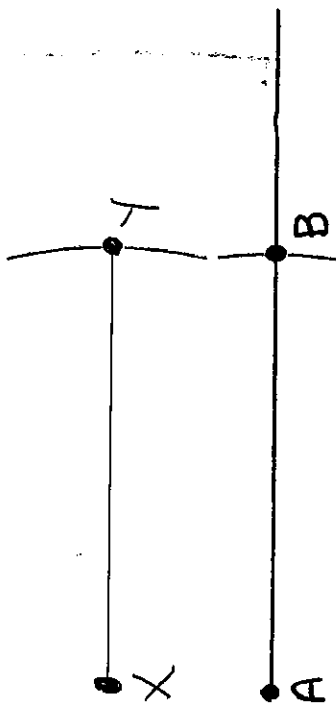
18. Are $\angle 6$ and $\angle 8$ vertical angles? Why or why not?

yes! sides of $\angle$ s form opposite rays.

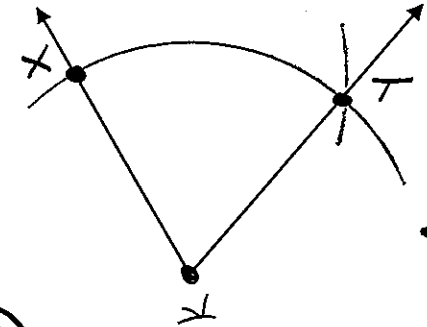
19. Are $\angle 2$ and $\angle 5$ vertical angles? Why or why not?

No, only one pair of sides form opposite rays.

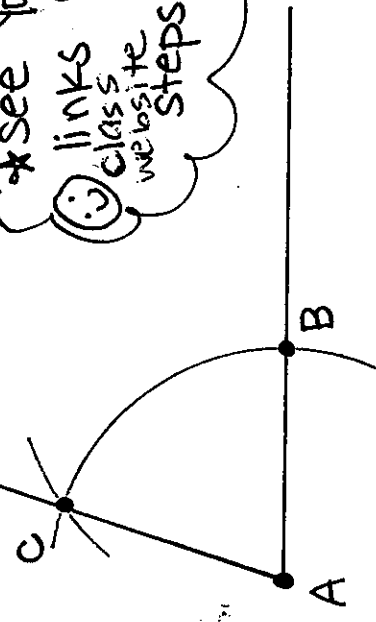
20. Construct a segment congruent to $\overline{XY}$



21. Construct an angle congruent to $\angle K$



*see youtube links on class website for steps #20-22



22. Construct the angle bisector of $\angle Z$

