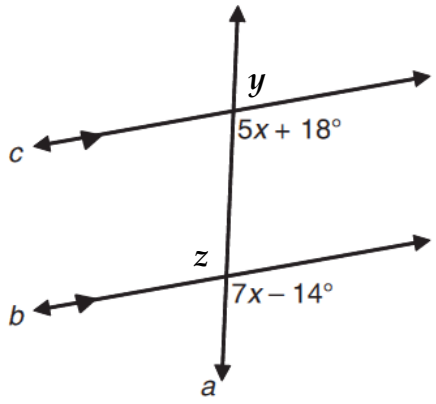
Name: _____

2.REV.2 – Lessons 2.4 – 2.10

Past due on: _____ Period: _____

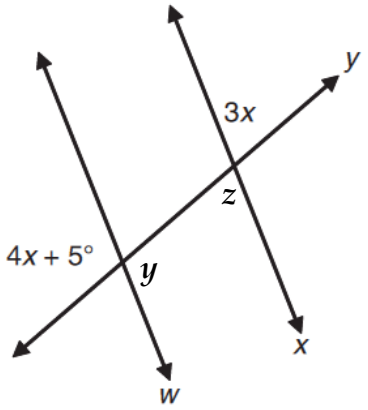
Set up and solve an equation to find the value of the variables: x, y, and z.

1. $b \parallel c$



$x =$ _____ $y =$ _____ $z =$ _____

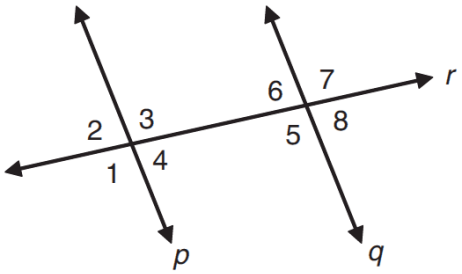
2. $w \parallel x$



$x =$ _____ $y =$ _____ $z =$ _____

3. In the figure, $m\angle 1 = (7x - 12)^\circ, m\angle 3 = (6x + 4)^\circ, \& \; m\angle 8 = (5x)^\circ$.

   a. Find the value of x that shows that $p \parallel q$. Explain your reasoning.



   b. Find the measure of each numbered angle:

$m\angle 1 =$ _____ $m\angle 2 =$ _____ $m\angle 3 =$ _____ $m\angle 4 =$ _____

$m\angle 5 =$ _____ $m\angle 6 =$ _____ $m\angle 7 =$ _____ $m\angle 8 =$ _____

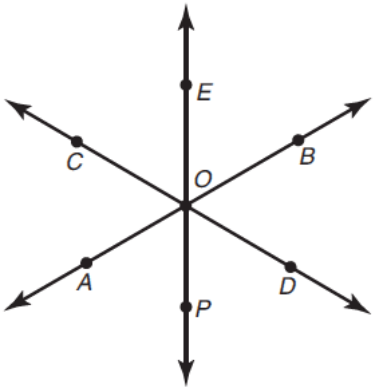
4. The figure shows intersecting lines. Which choice shows vertical angles?

   a. $\angle COE$ and $\angle BOD$

   b. $\angle COE$ and $\angle EOD$

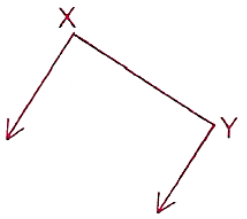
   c. $\angle EOB$ and $\angle AOP$

   d. $\angle AOC$ and $\angle COE$

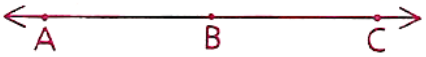


What conclusion can be made from the given information?

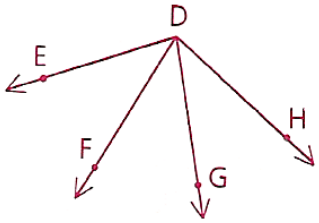
5. Given: $\angle X$ is a right angle
$\angle Y$ is a right angle



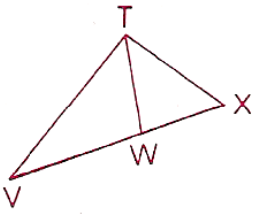
6. Given: B is the midpoint of $\overline{AC}$



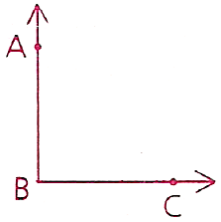
7. Given: $\overrightarrow{DF}$ & $\overrightarrow{DG}$ trisect $\angle EDH$



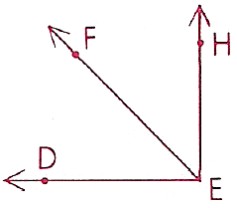
8. Given: $\overrightarrow{TW}$ bisects $\angle VTX$



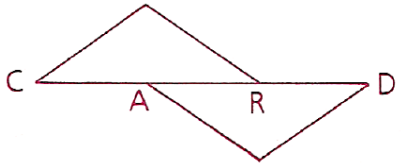
9. Given: $\overleftrightarrow{AB} \perp \overleftrightarrow{BC}$



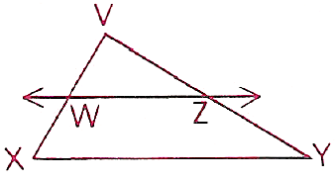
10. Given: $\angle DEH$ is a right angle



11. Given: A and R trisect $\overline{CD}$



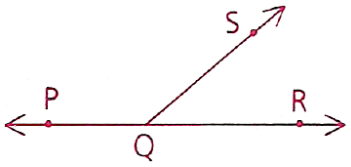
12. Given: $\overleftrightarrow{WZ}$ bisects $\overline{VY}$



TWO-COLUMN PROOF PROBLEMS:

13. Given: Diagram as shown

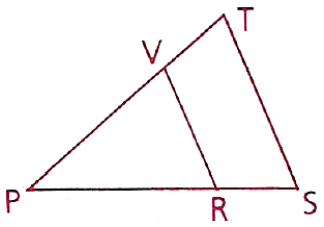
Prove: $\angle PQS$ is supp. to $\angle SQR$



Statements	Reasons

14. Given: $\overline{PV} \cong \overline{PR}$
$\overline{VT} \cong \overline{RS}$

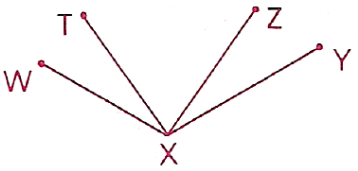
Prove: $\overline{PT} \cong \overline{PS}$



Statements	Reasons

15. Given: $\angle WXT \cong \angle YXZ$

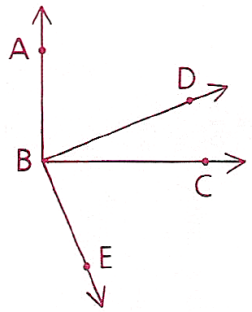
Prove: $\angle WXZ \cong \angle YXT$



Statements	Reasons

16. Given: $\angle ABC$ is a right angle
$\angle DBE$ is a right angle

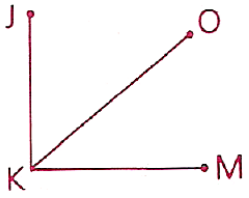
Prove: $\angle ABD \cong \angle CBE$



Statements	Reasons

17. Given: $\overline{JK} \perp \overline{KM}$

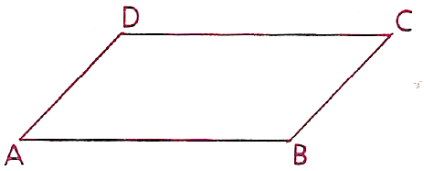
Prove: $\angle JKO$ is comp. to $\angle OKM$



Statements	Reasons

18. Given: $\angle A$ is supp. to $\angle D$
$\angle A \cong \angle C$

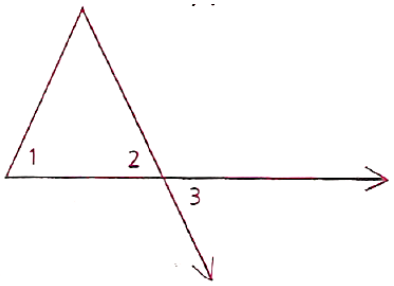
Prove: $\angle C$ is supp. to $\angle D$



Statements	Reasons

19. Given: $\angle 1 \cong \angle 3$

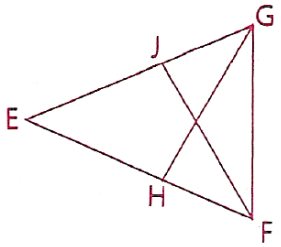
Prove: $\angle 1 \cong \angle 2$



Statements	Reasons

20. Given: $\angle EGF \cong \angle EFG$
$\angle EGH \cong \angle EFJ$

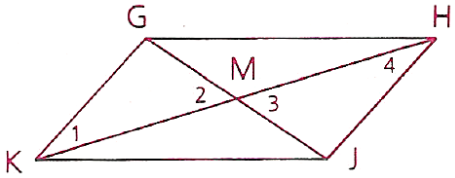
Prove: $\angle HGF \cong \angle JFG$



Statements	Reasons

21. Given: $\angle 1$ is comp. to $\angle 3$
$\angle 4$ is comp. to $\angle 2$

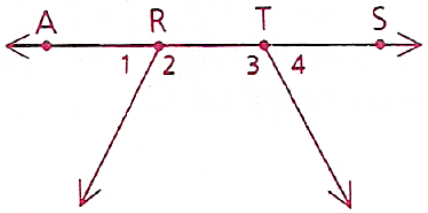
Prove: $\angle 1 \cong \angle 4$



Statements	Reasons

22. Given: Diagram as shown
$\angle 1 \cong \angle 4$

Prove: $\angle 2 \cong \angle 3$



Statements	Reasons

EXTRA CREDIT:

Given: $\overline{XY} \perp \overline{YW}$
$\overline{AB} \perp \overline{BC}$

Find: $m\angle DBC$