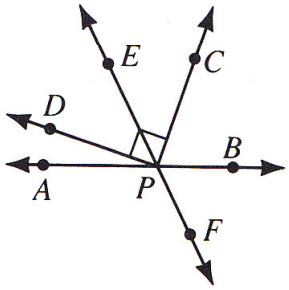
Name: _____ Date: _____ Row: _____ Period: _____

Assignment #: _____

CHAPTER 2 REVIEW WORKSHEET

Remember to organize and show all of your work.

1. Write the hypothesis and the conclusion of the conditional statement:
   If $\angle A$ is a right angle, then $m\angle A = 90$.
2. Write the converse of the following statement:
   If $x < 0$, then $x^2 > 0$.
3. Justify each statement with a property from algebra.
   a. If $2x = 7$, then $7 = 2x$.
   b. If $-3y + x = 12$ and $x = 2y$, then $-3y + 2y = 12$.
4. $\overrightarrow{YK}$ is the bisector of $\angle XYZ$, $\overrightarrow{YD}$ is the bisector of $\angle KYZ$, and $m\angle XYZ = 144$. Find $m\angle KYD$.



Exs. 5–10

5. Name a pair of complementary angles.
6. Name two perpendicular rays.
7. Name a pair of adjacent supplementary angles.
8. $\overrightarrow{PE}$ bisects $\angle DPC$. Find $m\angle EPC$.
9. Complete: $m\angle APD + m\angle BPC =$ ___?___
10. Name a pair of vertical angles.

Complete.

11. If M is the midpoint of $\overline{PL}$, then $PM =$ ___?___.
12. If $\angle A$ and $\angle B$ are complementary and $m\angle A = 47$, then $m\angle B =$ ___?___.
13. If $\angle 1$ and $\angle 2$ are vertical angles, then $\angle 1$ ___?___ $\angle 2$.
14. If two lines form congruent adjacent angles, then the lines are ___?___.
15. Supplements of congruent angles are ___?___.

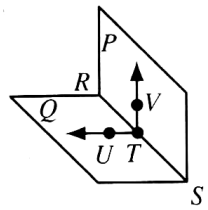
Classify each statement as true or false.

16. Perpendicular lines form right angles.
17. Adjacent angles must be complementary.
18. Two segments are congruent if and only if their lengths are equal.
19. Theorems that have already been proved can be used as reasons in proofs.

Cumulative Review, Chapters 1 and 2

Classify each statement as true or false.

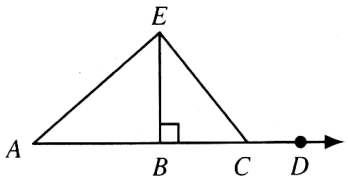
1. Points T, U, and V are collinear. _____
2. If T is the midpoint of $\overline{RS}$, then $RT = \frac{1}{2}RS$. _____
3. If T and V lie in plane P, then $\overleftrightarrow{TV}$ lies in plane P. _____
4. T, V, and S lie in only one plane. _____



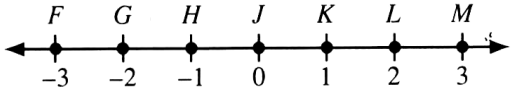
Exs. 1–4

Complete.

5. $\overline{AB} \perp$ _____
6. $m\angle AEB + m\angle BEC = m\angle$ _____
7. If $\overline{EA} \perp \overline{EC}$, $\angle AEB$ and $\angle$ _____ are complementary.
8. $\angle ECD$ appears to be a(n) _____ angle.
9. Length of $\overline{HM}$ = _____
10. The coordinate of the midpoint of $\overline{GM}$ is _____.



Exs. 5–8



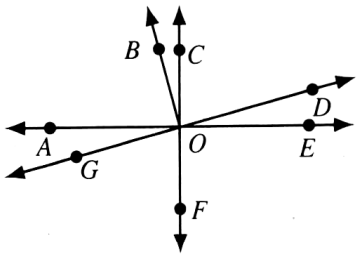
Exs. 9–10

11. Write **(a)** the hypothesis, **(b)** the conclusion, and **(c)** the converse of the statement "If $2x + 1 = 9$, then $x = 4$."

a. _____ **b.** _____ **c.** _____

In the diagram, $\overrightarrow{OB} \perp \overleftrightarrow{OD}$, $\overrightarrow{OC} \perp \overleftrightarrow{OE}$, and $m\angle AOG = 15$. Complete.

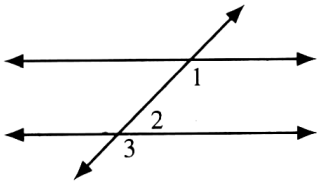
12. $m\angle BOD$ = _____
13. $m\angle DOE$ = _____
14. $m\angle BOE$ = _____
15. $m\angle COD$ = _____
16. $m\angle AOB$ = _____
17. $m\angle GOE$ = _____



Exs. 12–17

Supply the missing reasons in the proof.

18. Given: $\angle 1 \cong \angle 3$
Prove: $\angle 1$ and $\angle 2$ are supplementary.



Proof:

Statements	Reasons
1. $\angle 1 \cong \angle 3$, or $m\angle 1 = m\angle 3$	1. _____
2. $m\angle 3 + m\angle 2 = 180$	2. _____
3. $m\angle 1 + m\angle 2 = 180$	3. _____
4. $\angle 1$ and $\angle 2$ are supplementary	4. _____