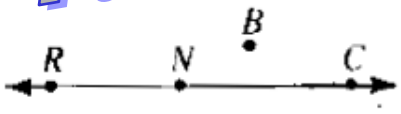
Geometry

Tune-Up #2

Name _____

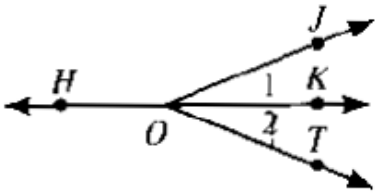
Date _____Per.____

1.



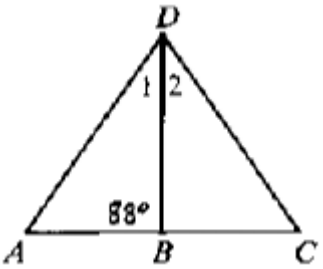
When $RN = 7$, $NC = 3x + 5$, and $RC = 18$, what is the value of x?

2.



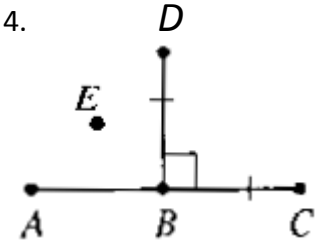
$m\angle 1 + m\angle 2 = m\angle$ _____

3.



What kind of angle is $\angle CBD$?

4.



Which of the following four things stated *can't* you conclude from the diagram *and why?*

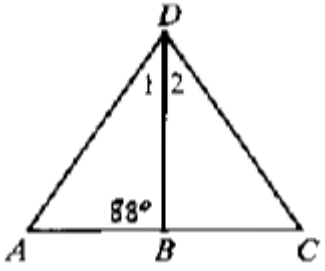
a. *A, B,* and *C* are collinear.

b. $\angle DBC$ is a right angle.

c. *B* is the midpoint of $\overline{AC}$.

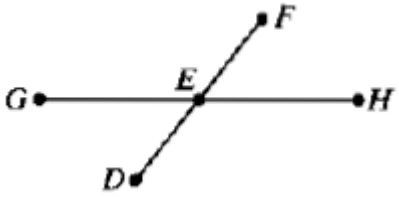
d. *E* is in the interior of $\angle DBA$.

5.



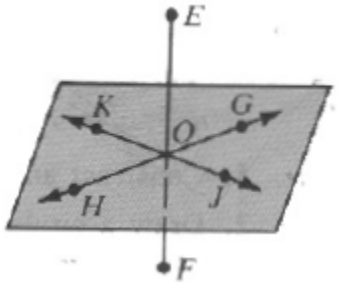
$\overrightarrow{DB}$ bisects $\angle ADC$, $m\angle 1 = 5x - 3$, and $m\angle 2 = x + 25$. Find the value of x.

6.



E is the midpoint of $\overline{DF}$. Find *DF* if $DE = 2x - 3$ and $EF = 5x - 24$.

7.

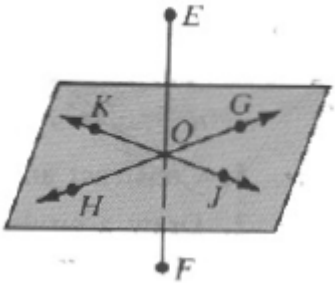


Which of the following sets of points are *not* coplanar?

a. *E, H, O, G* b. *K, O, G, E*

c. *E, O, F, J* d. *H, K, O, J*

8.

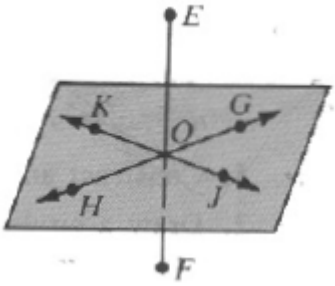


Which of the following sets of points are contained in *more* than one plane?

a. *G, O, J* b. *E, O, G*

c. *E, H, G* d. *G, O, H*

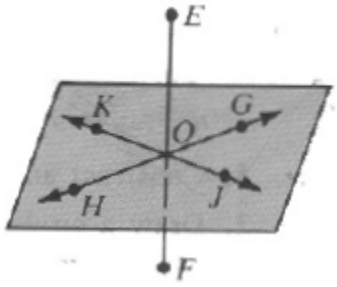
9.



How many planes contain point *E* and $\overleftrightarrow{JK}$?

a. 0 b. exactly 1

c. unlimited d. unknown

10.  If $\overleftrightarrow{GH}$ bisects $\overleftrightarrow{EF}$, which statement is *not necessarily* true? a. *O* is the midpoint of $\overleftrightarrow{GH}$ b. $\overline{EO} \cong \overline{OF}$ c. *E, F, G, H*, and *O* are coplanar d. $GO + OH = GH$	11. On a number line, point *R* has coordinate -5 and point *S* has coordinate 3. Point *X* lies on $\overrightarrow{SR}$ and $SX = 5$. Find the coordinate of *X.*	12. Which of the following is *not always* true when lines j and k intersect? a. Exactly one plane contains line j. b. The lines intersect in exactly one point. c. All points on j and k are coplanar points. d. Given any point *P* on j and any point *Q* on k, *P* and *Q* are collinear points.
13. Simplify $\frac{x^2 y}{3x^7}$	14. Solve for x $\frac{2}{3}(x+3) = x-7$	15. Factor $x^2 - 7x + 10$
16. Simplify $\sqrt{20}$	17. Graph $y = \frac{2}{5}x - 2$