

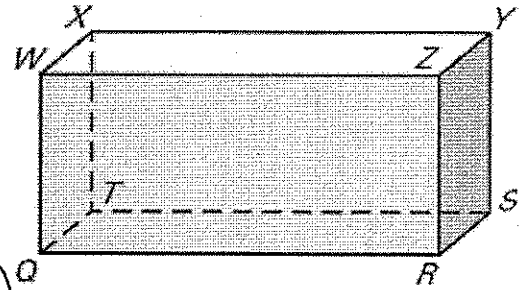
# Geometry

Name Kay

## 3.1-3.3 Review Worksheet

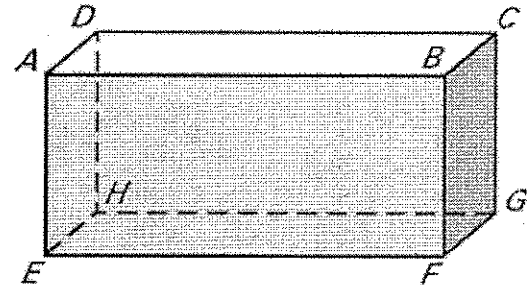
Think of each segment in the diagram as a part of a line. Complete the statement with parallel, skew, or perpendicular.

- $\overline{WZ}$  and  $\overline{XY}$  are parallel
- $\overline{WZ}$  and  $\overline{QW}$  are perpendicular
- $\overline{SY}$  and  $\overline{WX}$  are skew
- Plane WQR and plane SYT are parallel
- Plane RQT and plane WQR are perpendicular



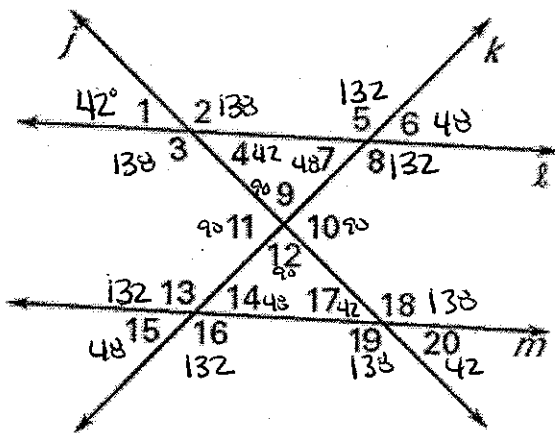
Think of each segment in the diagram as part of a line. Which line(s) or plane(s) appear to fit the description? LIST ALL SOLUTIONS!

- Line(s) parallel to  $\overline{AB}$ :  $\overleftrightarrow{DC}$ ,  $\overleftrightarrow{HG}$ ,  $\overleftrightarrow{EF}$
- Line(s) perpendicular to  $\overline{BF}$ :  $\overleftrightarrow{BC}$ ,  $\overleftrightarrow{FG}$ ,  $\overleftrightarrow{EF}$ ,  $\overleftrightarrow{AB}$
- Line(s) skew to  $\overline{CD}$  and containing point E:  $\overleftrightarrow{EA}$ ,  $\overleftrightarrow{EH}$
- Plane(s) perpendicular to plane ABE: ABC, EFG, CBF, ADH
- Plane(s) parallel to plane ABC: EFG



Use the given information to find the measure of all 20 angles.

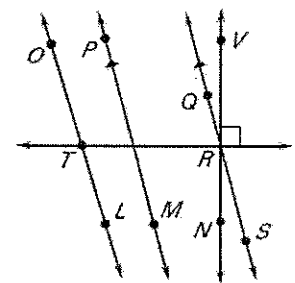
GIVEN:  $l \parallel m$ ,  $j \perp k$ ,  $m\angle 1 = 42^\circ$  and  $m\angle 7 = 48^\circ$



- Which angle is vertical to  $\angle 17$ ?  $\angle 20$
- Classify  $\angle 8$  and  $\angle 14$ : Consec. int.
- Are  $\angle 6$  and  $\angle 2$  corresponding? Yes
- Are  $\angle 6$  and  $\angle 2$  congruent? No  $\rightarrow$  lines not  $\parallel$
- Classify  $\angle 4$  and  $\angle 17$ : alt. int.  $\angle$ s
- Name all angles supplementary to  $\angle 3$ :  $\angle 1, \angle 4, \angle 17, \angle 20$

Use the markings in the diagram to answer 17-20

- Name a pair of parallel lines:  $\overleftrightarrow{PM}$ ,  $\overleftrightarrow{QS}$
- Name a pair of perpendicular lines:  $\overleftrightarrow{VN}$ ,  $\overleftrightarrow{TR}$
- Is  $\overline{QS}$  parallel to  $\overline{TR}$ ? No
- Is  $\overline{VN} \perp \overline{TR}$ ? Yes

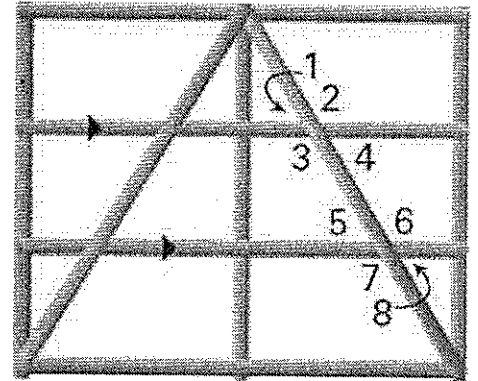


Complete the statement with *sometimes*, *always*, or *never*.

21. If two lines are not parallel, then they Sometimes intersect.
22. If one line is skew to another, then they Never intersect.
23. If two lines are perpendicular, then they Always intersect.
24. If two lines are coplanar, then they are Sometimes perpendicular.

Find the angle measure. Tell which postulate or theorem you used.

25. If  $m\angle 1 = 50^\circ$ , then  $m\angle 5 = 50^\circ$   
 Postulate/ Theorem: Corr.  $\Delta s \cong$
26. If,  $m\angle 4 = 45^\circ$  then  $m\angle 6 = 135^\circ$   
 Postulate/ Theorem: Consec. int.  $\Delta s$  supp
27. If,  $m\angle 2 = 130^\circ$  then  $m\angle 7 = 130^\circ$   
 Postulate/ Theorem: Alt. ext.  $\Delta s \cong$
28. If  $m\angle 6 = 123^\circ$ , then  $m\angle 3 = 123^\circ$   
 Postulate/ Theorem: Alt. int.  $\Delta s \cong$

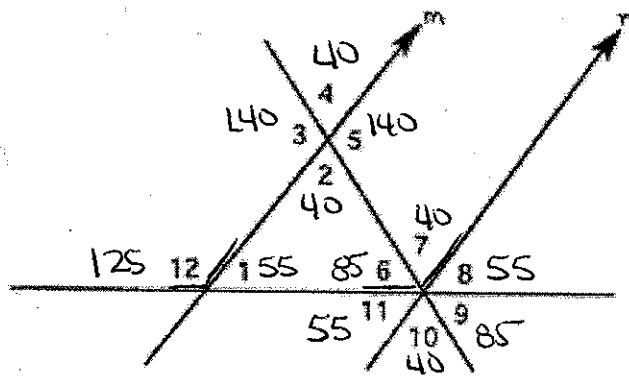


Find the measure of each of the following angles.

29.

GIVEN:  $m \parallel n$   
 $\angle 2 = 40$   
 $\angle 8 = 55$

(Questions 1-8)



- $\angle 7 = 40^\circ$
- $\angle 5 = 140^\circ$
- $\angle 1 = 55^\circ$
- $\angle 6 = 85^\circ$
- $\angle 12 = 125^\circ$
- $\angle 4 = 40^\circ$
- supp of  $\angle 9 = 95^\circ$
- comp of  $\angle 11 = 35^\circ$

Find the value of  $x$  that makes  $m$  parallel to  $n$ .

30. Alt. ext.  $\Delta s \cong$   
 $5x + 20 = 90$   
 $5x = 70$   
 $x = 14$

31. Corr.  $\Delta s \cong$   
 $4x - 28 = 100$   
 $4x = 128$   
 $x = 32$

32. Consec. int.  $\Delta s$  supp.  
 $3x + 15 + 75 = 180$   
 $3x + 90 = 180$   
 $3x = 90$   
 $x = 30$