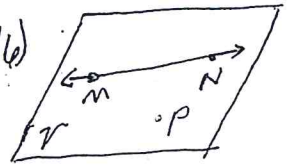
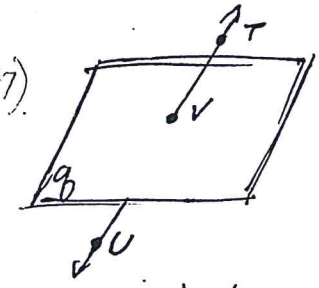
Key

Geometry Worksheet
Chapter 1 Review

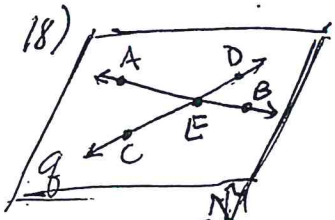
16)



17)



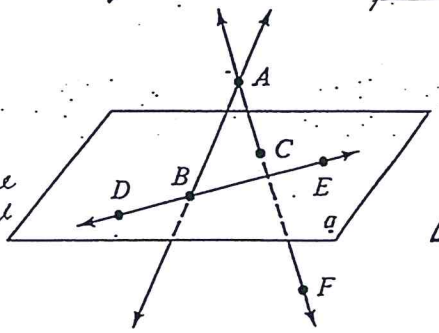
18)



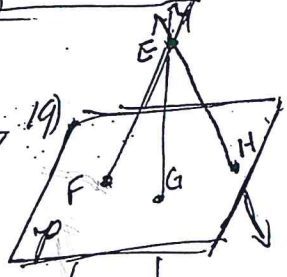
Part A

True or false?

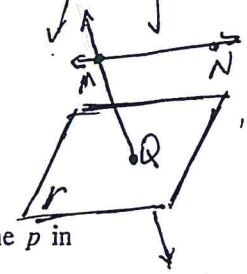
7. $\overleftrightarrow{DE}$ is contained in plane q. true
8. $\overleftrightarrow{AC}$ and $\overleftrightarrow{FA}$ are the same line. true
9. $\overleftrightarrow{AB}$ and $\overleftrightarrow{DE}$ intersect in point C. false
10. B, C, and E are ~~non~~coplanar. false
11. Point B is the intersection of $\overleftrightarrow{AB}$ and plane q. true
12. The intersection of $\overleftrightarrow{AF}$ and plane q is point C. true
13. $\overleftrightarrow{CF}$ ~~passes~~ does not through point E. false
14. Point A and plane q do not intersect. true
15. $\overleftrightarrow{DE}$ contains point B. true



19)



20)



Draw and label each figure described below. Use a straightedge.

B 16. $\overleftrightarrow{MN}$ lying in plane r and point P in plane r but not on $\overleftrightarrow{MN}$

17. $\overleftrightarrow{TU}$ intersecting plane q in point V

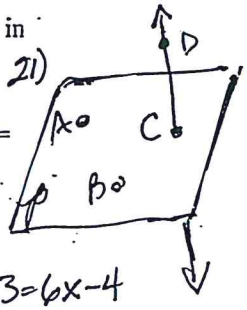
18. $\overleftrightarrow{AB}$ and $\overleftrightarrow{CD}$ lying in plane q such that $\overleftrightarrow{AB}$ and $\overleftrightarrow{CD}$ intersect at point E

19. $\overleftrightarrow{EF}$, $\overleftrightarrow{EG}$, and $\overleftrightarrow{EH}$ intersecting plane p in points F, G, and H, respectively

20. $\overleftrightarrow{MN}$ not intersecting plane r with $\overleftrightarrow{MQ}$ intersecting plane r in point Q

21. noncollinear points A, B, and C lying in plane p with $\overleftrightarrow{DC}$ intersecting plane p

21)

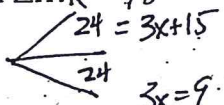


22. Given: $\overrightarrow{IJ}$ *bisects* $\angle HIK$, m $\angle HIK = 48$ and m $\angle JIK = 3x + 15$. Find x.

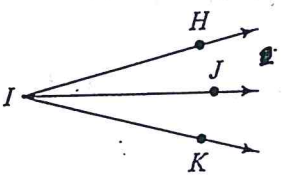
$24 = 3x+15$

$3x = 9$

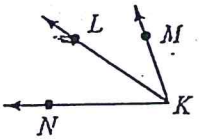
$x = 3$



(use in 22 & 24)



23. Given: $\overrightarrow{KL}$ bisects $\angle MKN$, m $\angle MKL = 5x + 3$, and m $\angle LKN = 6x - 4$. Find m $\angle MKL$. [1.4]



$5x+3=6x-4$

$3=x-4$

$7=x$

$\angle MKL = 5(7)+3$

$= 38°$

24. m$\angle HIK = 5x-18$

m$\angle HIJ = 3x-12$

m$\angle JIK = 22$

Find m$\angle HIK$

$3x-12+22=5x-18$

25

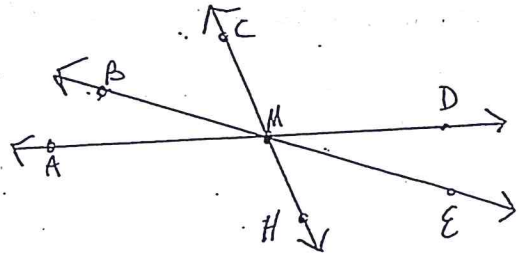
$3x+10=5x-18$

$10=2x-18$

$28=2x$

$x=14$

$5(14)-18=52°$



25 Name two pairs of $\angle BMA$ & $\angle DME$

a) vertical angles $\angle CMD$ & $\angle AMH$ + others

b) linear pairs $\angle BMC$ & $\angle CME$ $\angle AMH$ & $\angle HMD$ + others

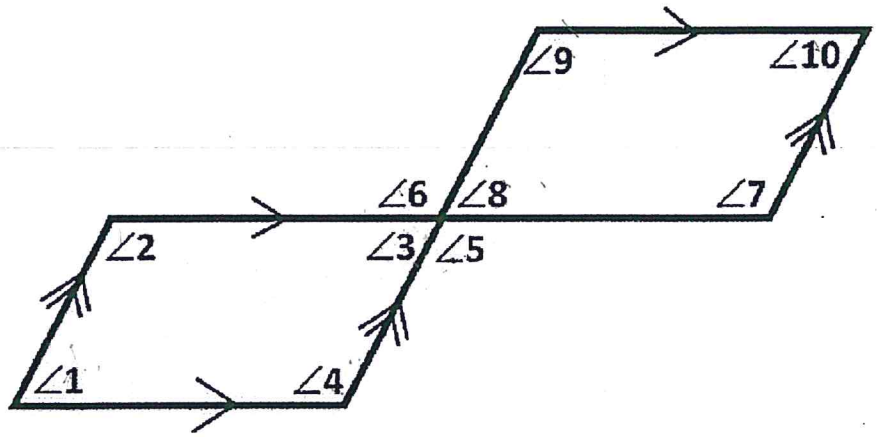
c) adjacent angles that are not linear pairs.

$\angle HME$ & $\angle EMD$ + others

$\angle AMH$ & $\angle HME$

26 ~~Find the coordinate of the midpoint of $\overline{GM}$.~~

~~The coordinate of G is −13 and the coordinate of M is 18.~~



Please write in your "In Class" section of your notebook.

Using linear pair, vertical angles, corresponding angles, consecutive angles, alternate interior angles, and alternate exterior angles:

Some answers. there are many more.

1) Explain ~~why it is not possible to jump from ∠1 to ∠3~~ how to get from ∠1 to ∠3 in two "jumps."

∠1+∠2=180° (CIA)
∠2+∠3=180° (CIA) So ∠1≅∠3 by substitution.

2) Find a path from ∠1 to ∠10 that uses at least 5 jumps
(ie: ∠1 to ∠4 by consecutive angles; ∠4 to ∠5 by alternate interior angles; ...)

∠1 to ∠4 by CIA, so supplementary, ∠4 to ∠5 by AIA, ∠5 to ∠6 by VA, ∠6 to ∠9 by AIA, ∠9 to ∠10 CIA (supplementary) so ∠1≅∠10

3) Find a path from ∠1 to ∠10 that uses vertical angles twice

∠1 to ∠2 supplementary CIA
∠2 to ∠3 supplem CIA so ∠1≅∠3
∠3≅∠8 VA, ∠5+∠8=180° CIA, ∠5≅∠9 CA ∠9+∠10=180° CIA so back to ≅

4) Find a path from ∠1 to ∠10 that uses every angle

5) Find the *shortest* path from ∠1 to ∠10

∠1 to ∠4 to CIA,
∠4 to ∠6 by CA,
∠6+∠9 by AIA
∠9 to ∠10 by CIA
} 2 So ≅