

Geometry

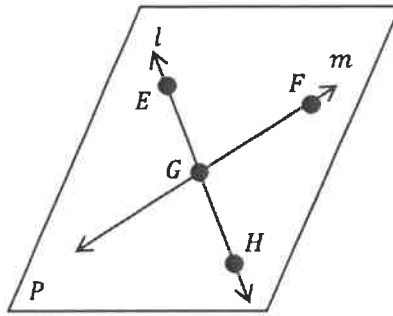
Name: Key

Quiz REVIEW 1a - Introduction to Geometry

Date: \_\_\_\_\_ Per: \_\_\_\_\_

Use the figure below for questions 1 - 4.

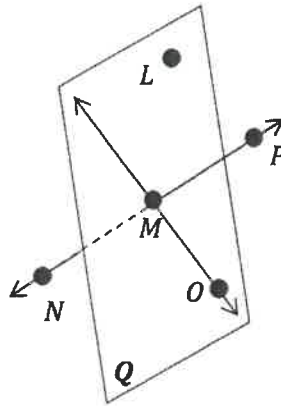
- 1) Name the intersection of line  $\overleftrightarrow{GF}$  and  $\overleftrightarrow{EH}$ .
- 2) Give another name for  $\overleftrightarrow{GF}$ .
- 3) Name two non-collinear points.
- 4) Give two other names for Plane P.



- 1) G
- 2) m
- 3) E and F
- 4) EGH and FEH

Use the figure below for questions 5 - 8.

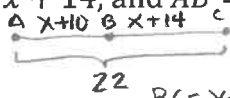
- 5) Name three non-collinear points.
- 6) Name the intersection of plane MOL and  $\overleftrightarrow{NP}$ .
- 7) Name a point coplanar to point O.
- 8) Give another name for  $\overleftrightarrow{PM}$ .



- 5) L, M and O
- 6) M
- 7) L
- 8)  $\overleftrightarrow{NP}$

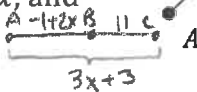
Use the figure below for questions 9 - 11.

- 9) If  $AC = 22$ ,  $BC = x + 14$ , and  $AB = x + 10$ , find  $BC$ .



$$\begin{aligned}
 x+10+x+14 &= 22 \\
 2x+24 &= 22 \\
 -24 &-24 \\
 2x &= -2 \rightarrow x = -1 \\
 BC &= x+14 \\
 BC &= -1+14 \\
 BC &= 13
 \end{aligned}$$

- 10) If  $AC = 3x + 3$ ,  $AB = -1 + 2x$ , and  $BC = 11$ , find the value of  $x$ .

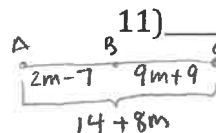


$$\begin{aligned}
 -1+2x+11 &= 3x+3 \\
 2x+10 &= 3x+3 \\
 2x &-2x \\
 10 &= x+3 \\
 -3 &-3 \\
 x &= 7
 \end{aligned}$$

- 11) If  $AB = 2m - 7$ ,  $BC = 9m + 9$ , and  $AC = 14 + 8m$ , find  $AC$ .

$$\begin{aligned}
 2m-7+9m+9 &= 14+8m \\
 11m+2 &= 14+8m \\
 -8m &-8m \\
 3m+2 &= 14 \\
 -2 &-2 \\
 3m &= 12 \\
 \frac{3m}{3} &= \frac{12}{3} \\
 m &= 4
 \end{aligned}$$

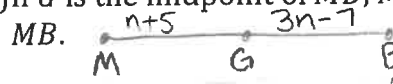
$$\begin{aligned}
 AC &= 14+8m \\
 &= 14+8(4) \\
 &= 14+32 \\
 &= 46
 \end{aligned}$$



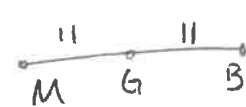
- 9) 13
- 10) 7
- 11) 46

12) If  $G$  is the midpoint of  $\overline{MB}$ ,  $MG = n + 5$  and  $GB = 3n - 7$ , find

12) 22

$MB$   
  
 $n+5 = 3n-7$   
 $-n \quad -n$   
 $5 = 2n-7$   
 $+7 \quad +7$   
 $12 = 2n$   
 $\frac{12}{2} = \frac{2n}{2}$   
 $n = 6$

$MG = n+5$   
 $MG = 6+5$   
 $MG = 11$

$MG = GB = 11$   
  
 $MB = 11+11$   
 $MB = 22$

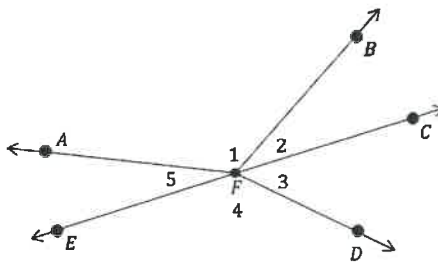
In the diagram below,  ~~$FD \perp FB$~~   $FD \perp FB$ . Use the diagram for questions

13 - 17.

13) Name the vertex of  $\angle 1$ .

14) Name the sides of  $\angle 5$ .

15) Give another name for  $\angle 4$ .



13)  $\angle AFB$

14)  $\overrightarrow{FA}$  and  $\overrightarrow{FD}$

15)  $\angle EFD$

16) If  $m\angle 3 = 68^\circ$ ,  ~~$m\angle BFC = 90^\circ$~~   $m\angle BFC = 90^\circ$

16)  $22^\circ$

$$m\angle 3 + m\angle BFC = 90^\circ$$

$$68^\circ + m\angle BFC = 90^\circ$$

$$-68^\circ \quad -68^\circ$$

$$m\angle BFC = 22^\circ$$

17) If  ~~$m\angle 5 = 47^\circ$~~  and  ~~$m\angle 1 = 98^\circ$~~  find  ~~$m\angle BFC$~~

17)  $35^\circ$

$$m\angle 5 = 47^\circ, m\angle 1 = 98^\circ \text{ find } m\angle BFC$$

$$m\angle 5 + m\angle 1 + m\angle BFC = 180^\circ$$

$$47^\circ + 98^\circ + m\angle BFC = 180^\circ$$

$$145^\circ + m\angle BFC = 180^\circ$$

$$-145^\circ \quad -145^\circ$$

$$m\angle BFC = 35^\circ$$