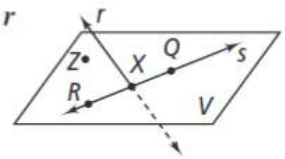
QUIZ 1 review

Note- the numbers do not match but the problems assigned are all listed below.

Use the figure at the right for Exercises 1–4. Note that line *r* pierces the plane at *X*. It is not coplanar with *V*.



1. What are two other ways to name $\overleftrightarrow{QX}$?

   To start, remember you can name a line by any __?__ point(s) on the line or by __?__ lowercase letter(s). two; one

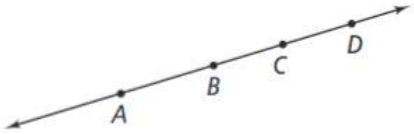
   Two other ways to name $\overleftrightarrow{QX}$ are line __?__ and __?__. *s*; Answers may vary. Sample: $\overleftrightarrow{XQ}$

2. What are two other ways to name plane *V*? Answers may vary. Sample: *XQZ*; *RZQ*

3. Name three collinear points. *R*, *X*, and *Q*

4. Name four coplanar points. *Z*, *R*, *X*, and *Q*

Use the figure at the right for Exercises 5–7.



5. Name six segments in the figure. To start, remember that a segment is part of a line that consists of __?__ endpoints. two

   Six segments are $\overline{AB}$, $\overline{BC}$, __?__, __?__, __?__, and __?__. $\overline{CD}$; $\overline{AC}$; $\overline{AD}$; $\overline{BD}$

6. Name the rays in the figure. Answers may vary. Samples: $\overrightarrow{AB}$ or $\overrightarrow{AC}$ or $\overrightarrow{AD}$; $\overrightarrow{BC}$ or $\overrightarrow{BD}$; $\overrightarrow{CD}$; $\overrightarrow{DC}$ or $\overrightarrow{DB}$ or $\overrightarrow{DA}$; $\overrightarrow{CB}$ or $\overrightarrow{CA}$; $\overrightarrow{BA}$

7. a. Name the pairs of opposite rays with endpoint *C*.
   Answers may vary. Samples: $\overrightarrow{CD}$ and $\overrightarrow{CA}$ or $\overrightarrow{CB}$
   b. Name another pair of opposite rays.
   Answers may vary. Samples: $\overrightarrow{BA}$ and $\overrightarrow{BD}$ or $\overrightarrow{BC}$

For Exercises 8–12, determine whether each statement is *always*, *sometimes*, or *never* true.

8. Plane *ABC* and plane *DEF* are the same plane. sometimes

9. $\overleftrightarrow{DE}$ and $\overleftrightarrow{DF}$ are the same line. sometimes

10. Plane *XYZ* does not contain point *Z*. never

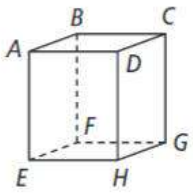
11. All the points of a line are coplanar. always

12. Two rays that share an endpoint form a line. sometimes

QUIZ 1 review

Note- the numbers do not match but the problems assigned are all listed below.

Use the figure at the right for Exercises 13–21.



Name the intersection of each pair of planes. To start, identify the points that both planes contain.

13. planes *DCG* and *EFG* $\overleftrightarrow{GH}$

14. planes *EFG* and *ADH* $\overleftrightarrow{EH}$

15. planes *BCG* and *ABF* $\overleftrightarrow{BF}$

Name two planes that intersect in the given line. To start, identify the planes that contain the given line.

16. $\overleftrightarrow{CD}$
ABC and DCG

17. $\overleftrightarrow{DH}$
DHG and DHE

18. $\overleftrightarrow{EF}$
EFG and EFB

Copy the figure. Shade the plane that contains the given points.

19. *A, B, C*

20. *C, D, H*

21. *E, H, B*

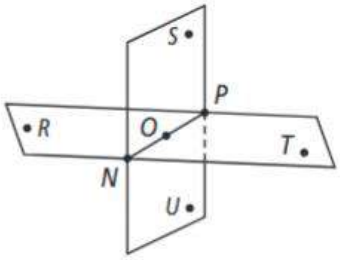
Postulate 1-4 states that any three noncollinear points lie in one plane. Find the plane that contains the first three points listed. Then determine whether the fourth point is in that plane. Write *coplanar* or *noncoplanar* to describe the points.

22. *P, T, R, N*
coplanar

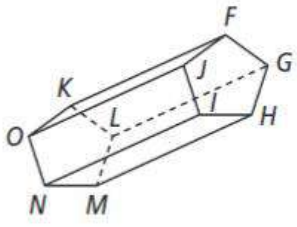
23. *P, O, S, N*
coplanar

24. *T, R, N, U*
noncoplanar

25. *P, O, R, S*
noncoplanar



Use the diagram at the right. How many planes contain each line and point?



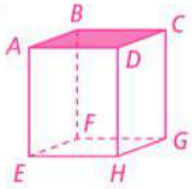
26. $\overleftrightarrow{KL}$ and *G* 1

27. $\overleftrightarrow{HM}$ and *F* 1

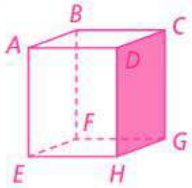
28. $\overleftrightarrow{JI}$ and *G* 1

29. $\overleftrightarrow{NM}$ and *M* infinitely many

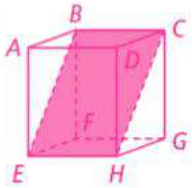
19.



20.



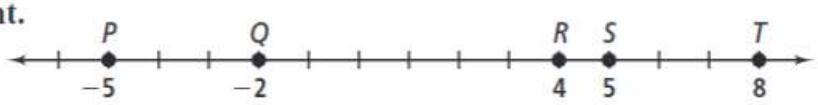
21.



QUIZ 1 review

Note- the numbers do not match but the problems assigned are all listed below.

Find the length of each segment. To start, find the coordinate of each endpoint.



1. $\overline{PR}$ 9
2. $\overline{QT}$ 10
3. $\overline{QS}$ 7

Use the number line at the right for Exercises 4–6.

4. If $GH = 31$ and $HI = 11$, then $GI =$ 42.

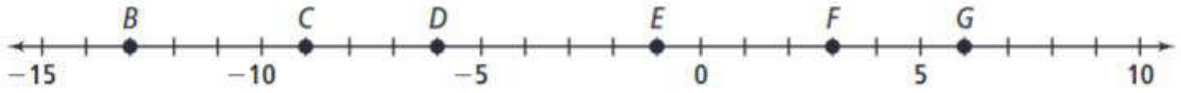
5. If $GH = 45$ and $GI = 61$, then $HI =$ 16.

6. **Algebra** $GH = 7y + 3$, $HI = 3y - 5$, and $GI = 9y + 7$.

   a. What is the value of y? 9

   b. Find GH, HI, and GI. 66; 22; 88

Use the number line below for Exercises 7–9. Tell whether the segments are congruent. To start, use the definition of distance. Use the coordinates of the points to write an equation for each distance.

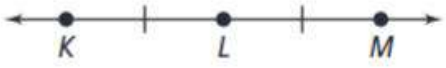


7. $\overline{CE}$ and $\overline{FD}$ no
8. $\overline{CD}$ and $\overline{FG}$ yes
9. $\overline{GE}$ and $\overline{BD}$ yes

For Exercises 10–12, use the figure below. Find the value of KL.

10. $KL = 3x + 2$ and $LM = 5x - 10$ 20

11. $KL = 8x - 5$ and $LM = 6x + 3$ 27



12. $KL = 4x + 7$ and $LM = 5x - 4$ 51

On a number line, the coordinates of D, E, F, G, and H are -9, -2, 0, 3, and 5, respectively. Find the lengths of the two segments. Then tell whether they are congruent.

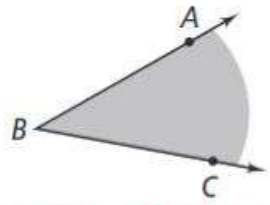
13. $\overline{DG}$ and $\overline{DH}$ 12 and 14; no
14. $\overline{DE}$ and $\overline{EH}$ 7 and 7; yes
15. $\overline{EG}$ and $\overline{GH}$ 5 and 2; no
16. $\overline{EG}$ and $\overline{FH}$ 5 and 5; yes

QUIZ 1 review

Note- the numbers do not match but the problems assigned are all listed below.

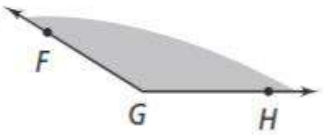
Name each shaded angle in three different ways. To start, identify the rays that form each angle.

1.



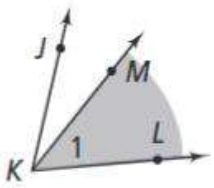
∠ABC, ∠CBA, ∠B

2.



∠FGH, ∠HGF, ∠G

3.



∠MKL, ∠LKM, ∠1

Use the diagram below. Find the measure of each angle. Then classify the angle as *acute, right, obtuse,* or *straight.*

4. $\angle AFB$

To start, identify $\angle AFB$. Then use the definition of the measure of an angle to find $m\angle AFB$.

$m\angle AFB = |\boxed{180} - \boxed{130}| = \boxed{50}$

QUIZ 1 review

Note- the numbers do not match but the problems assigned are all listed below.

5. $\angle AFD$ 140; obtuse

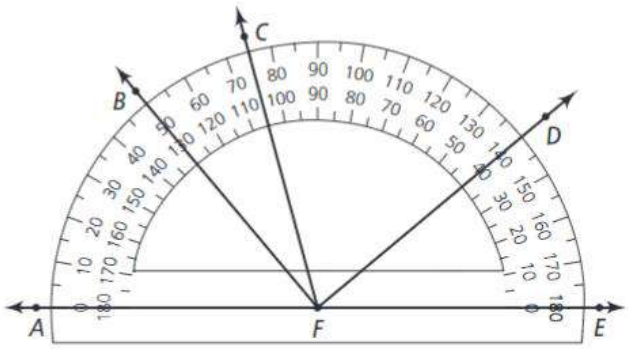
6. $\angle CFD$ 65; acute

7. $\angle BFD$ 90; right

8. $\angle AFE$ 180; straight

9. $\angle BFE$ 130; obtuse

10. $\angle AFC$ 75; acute



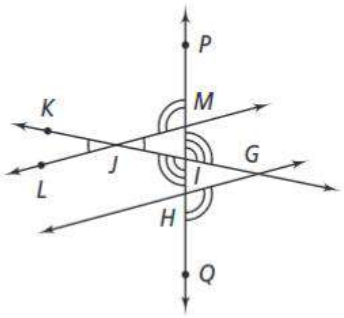
Use the diagram at the right. Complete each statement.

11. $\angle MIG \cong$ $\angle JIH$

12. $\angle PMJ \cong$ $\angle GHQ$

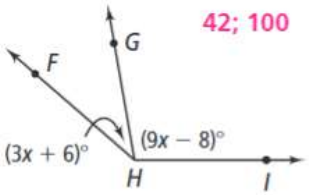
13. If $m\angle KJL = 30$, then $m\angle$ MJI $= 30$.

14. If $m\angle LMP = 100$, then $m\angle QHG =$ 100.



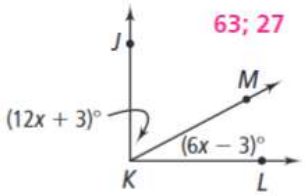
15. If $m\angle FHI = 142$, what are $m\angle FHG$ and $m\angle GHI$?

42; 100



16. $\angle JKL$ is a right angle. What are $m\angle JKM$ and $m\angle MKL$?

63; 27

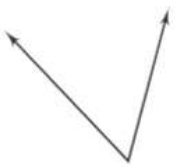


Use a protractor. Measure and classify each angle.

17.

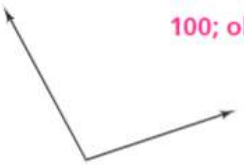
162; obtuse

18.



58; acute

19.



100; obtuse

20.

90; right