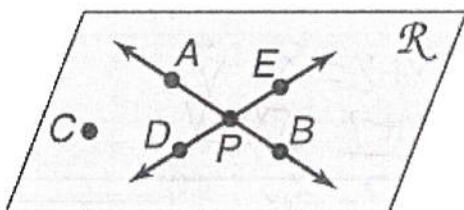


Geometry
Chapter 1 Practice Test

Name KEY
Date _____ Period _____

Refer the following figure for problems 1 - 5.

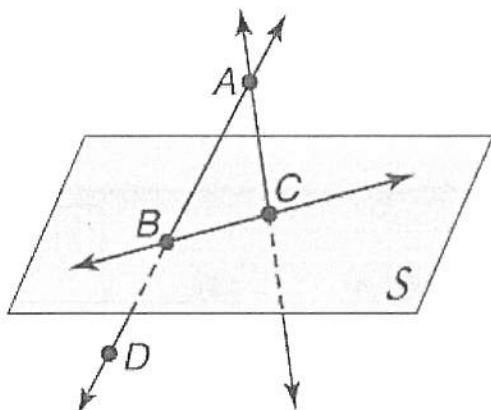


- 1) Name a point that is collinear with points D and P .
- 2) Name a point that is noncollinear with points A and B .
- 3) What is another name for plane R ?
- 4) What is another name for $\overleftrightarrow{BP}$?
- 5) What is the intersection of $\overleftrightarrow{AB}$ and $\overleftrightarrow{DE}$?

(other answers exist)

- 1) E
- 2) D
- 3) ADP
- 4) BA
- 5) P

Refer the following figure for problems 6 - 9.



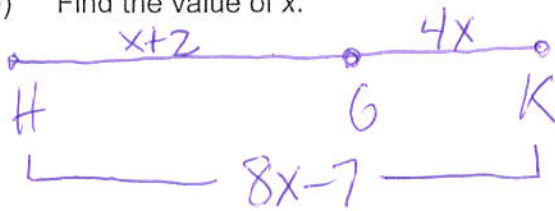
- 6) What is the intersection of plane S and $\overleftrightarrow{BC}$?
- 7) What is the intersection of plane S and $\overleftrightarrow{AD}$?
- 8) Name three points that are coplanar.
- 9) Are points A , B , and C coplanar?

- 6) BC
- 7) B
- 8) A, B, C
- 9) yes

Use the following information for numbers 10 and 11.

Point G is between points H and K, $HG = x + 2$, $GK = 4x$, and $HK = 8x - 7$

- 10) Find the value of x .



$$x + 2 + 4x = 8x - 7$$

$$\cancel{5x} + 2 = \cancel{8x} - 7$$

$$\cancel{-5x} + 7 = \cancel{-5x} + 7$$

$$9 = 3x$$

$$x = 3$$

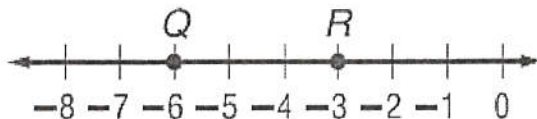
- 11) Find the length of HK .

$$8(3) - 7 = 17$$

10) $x = 3$

11) 17

Use the number line for problems 12 & 13.



$$\frac{-6 + 3}{2} = \frac{-9}{2}$$

- 12) Find the midpoint of $\overline{QR}$

12) $-9/2$

- 13) Find the measure of QR .

13) 3

Use the points $A(2,2)$ and $B(7,4)$ for problems 14 & 15.

- 14) Find the coordinates of the midpoint of AB .

$$\frac{2+7}{2} = \frac{9}{2} \text{ (or } 4.5)$$

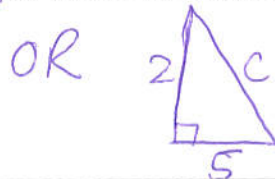
$$\frac{2+4}{2} = 3$$

14) $(4.5, 3)$

- 15) Find the distance between A and B. Answers can be left in radical form or a decimal rounded to the nearest tenth place.

$$d = \sqrt{(2-7)^2 + (2-4)^2}$$

$$= \sqrt{25 + 4} = \sqrt{29}$$



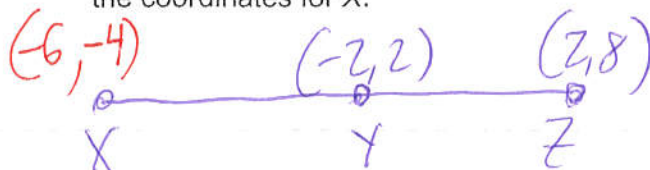
$$2^2 + 5^2 = c^2$$

$$29 = c^2$$

$$c = \sqrt{29}$$

15) $\sqrt{29}$

- 16) $Y(-2,2)$ is the midpoint of $\overline{XZ}$. If Z has coordinates $(2, 8)$, find the coordinates for X.



16) $(-6, -4)$

Determine whether each statement is true or false.

17) Any three points are coplanar.

17) true

18) An acute angle has no complement.

18) false

19) All adjacent angles are congruent.

19) false

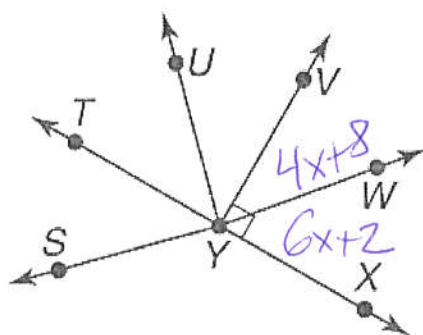
20) All vertical angles are congruent.

20) true

21) If D is between M and T , then $MD = DT + MT$.

21) false

Refer to the following figure for problems 22 – 30.



22) Name a pair of vertical angles.

22) $\angle TYS, \angle WYX$

23) Name the angle that is complementary to $\angle VYW$.

23) $\angle WYX$

24) Name a right angle.

24) $\angle VYX$

25) Name a linear pair.

25) $\angle TYS, \angle XYS$

26) Is $\overline{VY} \perp \overline{TX}$?

26) yes

27) Name the sides of $\angle SYT$.

27) $\overrightarrow{YT}, \overrightarrow{YS}$

28) Name the vertex of $\angle TYW$.

28) Y

29) Name a pair of opposite rays.

29) $\overrightarrow{YT}, \overrightarrow{YX}$

30) If $m\angle VYW = 4x + 8$, $m\angle WYX = 6x + 2$, find the value of x .

30) $x = 8$

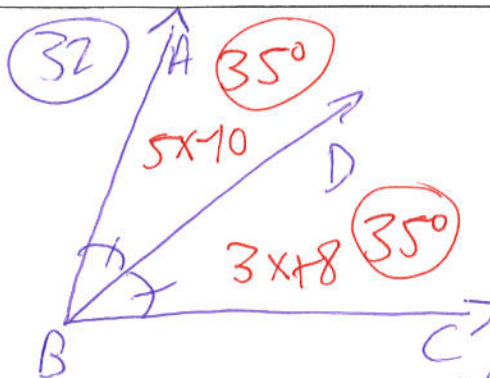
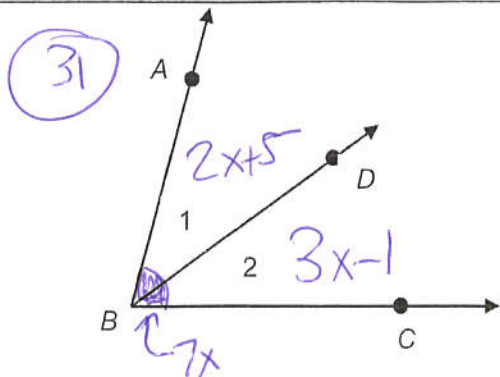
$$4x + 8 + 6x + 2 = 90$$

$$10x + 10 = 90$$

$$10x = 80$$

$$x = 8$$

Refer to the following figure for problems 31 – 34.



- 31) Find the value of x if $m\angle ABC = 7x$, $m\angle 1 = 2x + 5$, & $m\angle 2 = 3x - 1$.

31) $x = 2$

$$\begin{aligned}
 2x + 5 + 3x - 1 &= 7x \\
 5x + 4 &= 7x \\
 \underline{-5x} \quad \underline{-5x} & \\
 4 &= 2x \quad x = 2
 \end{aligned}$$

- 32) If $\overline{BD}$ bisects $\angle ABC$, $m\angle ABD = 5x - 10$ & $m\angle DBC = 3x + 8$, find $m\angle ABC$.

32) 70°

$$\begin{aligned}
 5x - 10 &= 3x + 8 \\
 \underline{-3x} \quad \underline{+10} \quad \underline{-3x} \quad \underline{+10} & \\
 2x &= 18 \quad x = 9
 \end{aligned}$$

- 33) If $\angle ABC$ is a right angle, then what type of angle is $\angle ABD$?

33) acute

- 34) If $\angle ABC$ is a right angle and $\overline{BD}$ bisects $\angle ABC$, what is $m\angle ABD$?

34) 45°

- 35) Find the measures of two supplementary angles if the measure of one angle is five times its supplement.

35) 39 150

$$\begin{aligned}
 x + 5x &= 180 \\
 6x &= 180 \\
 x &= 30, \quad 2^{\text{nd}} \text{ angle} = 150
 \end{aligned}$$