



Jakarta International School

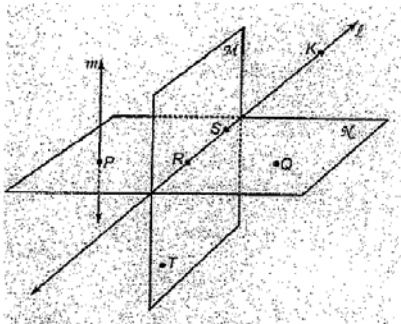
8<sup>th</sup> Grade – AG1

Practice Test - Green

Goal 5: Points, Lines, and Planes

Goal 5: Solve problems using visualization and geometric modeling

Section 1: Points, Lines, and Planes



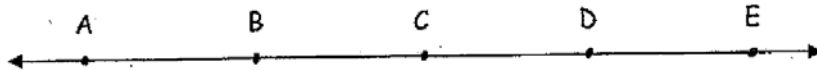
Use the diagram above to answer the following questions. (1.5 points per problem)

- How many planes contain  $\overline{RS}$  ?
- What is the intersection of line  $m$  and plane  $N$  ?
- Are  $R, P, S$  and  $T$  coplanar ?
- What is the intersection of line  $\ell$  and plane  $M$ .

Infinity many  
Point P.  
No  
 $\overline{RS}$

Section 2: Distance, Line Segments, and Rays

- Using the number line below, state all the line segments congruent to  $\overline{AC}$ . (3 points)



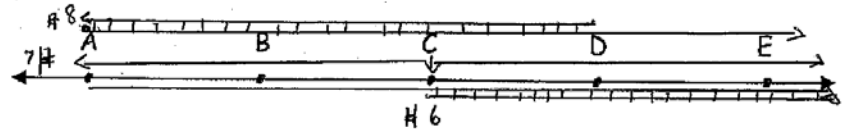
Answers:  $\overline{BD}$  and  $\overline{CE}$

Name: Solutiois

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

Score: 20

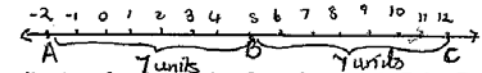
Use the following diagram for questions 6, 7, and 8 (3 points)



Find the intersection of:

- $\overline{AB}$  and  $\overline{CD}$   $\overrightarrow{CE}$  or  $\overrightarrow{CD}$
- $\overline{CA}$  and  $\overline{CE}$   $C$
- $\overline{AC}$  and  $\overline{DB}$   $\overline{AD}$

Section 3: Midpoints



- On a number line, if the coordinate of point  $A$  is  $-2$  and a point  $B$  is  $5$ , find: (2 points)

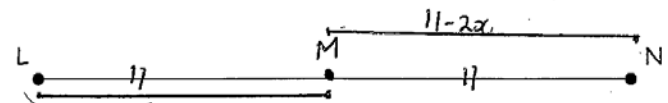
- the coordinate of point  $C$  if  $B$  is the midpoint of  $\overline{AC}$

Length of  $\overline{AB} = 5 - (-2) = 7$  units  
Co-ordinate of  $C = 5 + 7 = 12$

- the length of  $\overline{AC}$

Length of  $\overline{AC} = 12 - (-2) = 14$  units  
or  $\overline{AB} + \overline{BC} = 7 + 7 = 14$  units

- $\overline{LN}$  is bisected at point  $M$ . The measure of  $\overline{LM}$  is  $5x+4$ . The measure of  $\overline{MN}$  is  $11-2x$ . Find the measure of  $\overline{LN}$ . (3 points)



$\overline{LM} = \overline{MN}$   
 $5x+4 = 11-2x$   
 $7x = 7$   
 $x = 1$

Measure of  $\overline{LN} = \overline{LM} + \overline{MN}$   
 $= 5x+4 + 11-2x$   
 $= 3x+15$   
 $= 3(1)+15$   
 $= 18$  units

**Section 4: Constructions** (3 points)



- Using a straight edge and a compass, construct a line segment congruent to  $\overline{AB}$  and name it  $\overline{CD}$ .
- Bisect  $\overline{CD}$  at point P
- Place point M on  $\overline{PD}$  and construct a perpendicular line through M so that  $\overline{LM} \perp \overline{PD}$ .

