

1. Name this plane in as many ways as you can.
2. Name a ray in this picture that has endpoint B.
3. Name a line in this picture.

4. Which names a pair of opposite rays (rays pointing in opposite directions)?

- A  $\overrightarrow{AB}$  and  $\overrightarrow{BG}$       C  $\overrightarrow{AB}$  and  $\overrightarrow{BA}$   
 B  $\overrightarrow{BC}$  and  $\overrightarrow{AB}$       D  $\overrightarrow{BD}$  and  $\overrightarrow{BE}$

5.  $R, S,$  and  $T$  are collinear, and  $S$  is between  $R$  and  $T$ . If  $RS = x + 1$ ,  $ST = 2x - 2$ , and  $RT = 5x - 5$ , find  $RT$ .

6.  $\overrightarrow{VX}$  bisects  $\angle WVY$ ,  $m\angle WVX = (6x)^\circ$ , and  $m\angle WVY = (16x - 42)^\circ$ .  
 What is the value of  $x$ ?

7.  $M$  is the midpoint of  $\overline{RS}$ .  $R$  has coordinates  $(-2, 10)$ , and  $M$  has coordinates  $(3, 5)$ . What are the coordinates of  $S$ ?

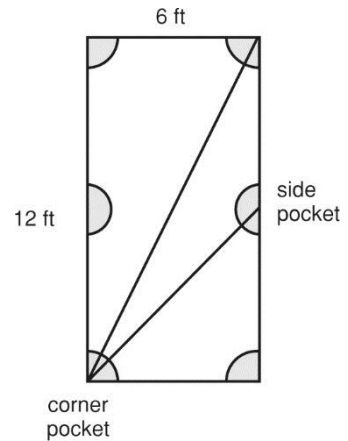
Snooker is a kind of pool or billiards played on a 6-foot-by-12-foot table. The side pockets are halfway down the rails (long sides).

8. Find the distance, to the nearest tenth of a foot, diagonally across the table from corner pocket to corner pocket.

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9. Find the distance, to the nearest tenth of an inch, diagonally across the table from corner pocket to side pocket.

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Turn to the back!



10. A city planner designs a park that is a quadrilateral with vertices at  $J(-3, 1)$ ,  $K(1, 3)$ ,  $L(5, -1)$ , and  $M(-1, -3)$ . There is an entrance to the park at the midpoint of each side of the park. A straight path connects each entrance to the entrance on the opposite side. Assuming each unit of the coordinate plane represents 10 meters, what is the total length of the paths to the nearest meter?

**(You may use a calculator for this problem!)**

