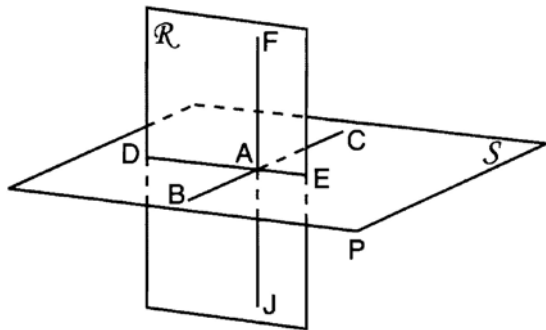


**G.G.5: Planes: Know and apply that two planes are perpendicular to each other if and only if one plane contains a line perpendicular to the second plane**

- 1 If  $\overleftrightarrow{AB}$  is contained in plane  $\mathcal{P}$ , and  $\overleftrightarrow{AB}$  is perpendicular to plane  $\mathcal{R}$ , which statement is true?
- 1)  $\overleftrightarrow{AB}$  is parallel to plane  $\mathcal{R}$
  - 2) Plane  $\mathcal{P}$  is parallel to plane  $\mathcal{R}$
  - 3)  $\overleftrightarrow{AB}$  is perpendicular to plane  $\mathcal{P}$ .
  - 4) Plane  $\mathcal{P}$  is perpendicular to plane  $\mathcal{R}$
- 2 As shown in the diagram below,  $\overline{FJ}$  is contained in plane  $\mathcal{R}$ ,  $\overline{BC}$  and  $\overline{DE}$  are contained in plane  $\mathcal{S}$ , and  $\overline{FJ}$ ,  $\overline{BC}$ , and  $\overline{DE}$  intersect at  $A$ .



Which fact is sufficient to show that planes  $\mathcal{R}$  and  $\mathcal{S}$  are perpendicular?

- 1)  $\overline{FA} \perp \overline{DE}$
- 2)  $\overline{AD} \perp \overline{AF}$
- 3)  $\overline{BC} \perp \overline{FJ}$
- 4)  $\overline{DE} \perp \overline{BC}$

**G.G.5: Planes: Know and apply that two planes are perpendicular to each other if and only if one plane contains a line perpendicular to the second plane****Answer Section**

1 ANS: 4 REF: 061213ge

2 ANS: 3

As originally administered, this question read, “Which fact is *not* sufficient to show that planes  $\mathcal{R}$  and  $\mathcal{S}$  are perpendicular?” The State Education Department stated that since a correct solution was not provided for Question 11, all students shall be awarded credit for this question.

REF: 081211ge