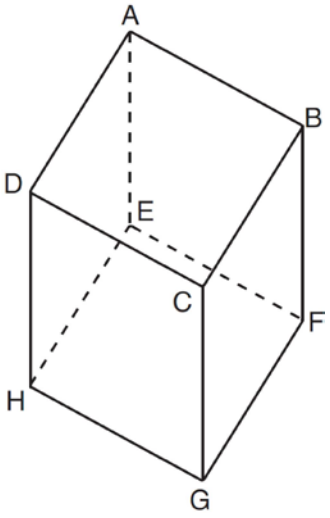
Name: _____

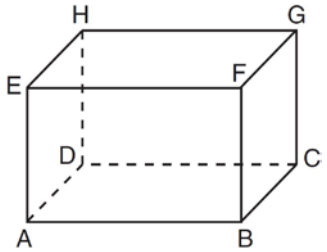
G.MG.A.1: Solids

1 Which pair of edges is *not* coplanar in the cube shown below?



1) $\overline{EH}$ and $\overline{CD}$
2) $\overline{AD}$ and $\overline{FG}$
3) $\overline{DH}$ and $\overline{AE}$
4) $\overline{AB}$ and $\overline{EF}$

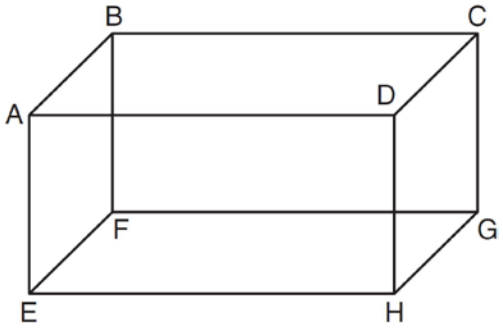
2 A right rectangular prism is shown in the diagram below.



Which line segments are coplanar?

1) $\overline{EF}$ and $\overline{BC}$
2) $\overline{HD}$ and $\overline{FG}$
3) $\overline{GH}$ and $\overline{FB}$
4) $\overline{EA}$ and $\overline{GC}$

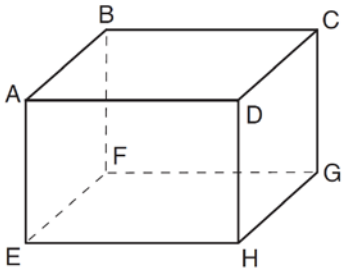
3 The diagram below shows a rectangular prism.



Which pair of edges are segments of lines that are coplanar?

1) $\overline{AB}$ and $\overline{DH}$
2) $\overline{AE}$ and $\overline{DC}$
3) $\overline{BC}$ and $\overline{EH}$
4) $\overline{CG}$ and $\overline{EF}$

4 A rectangular right prism is shown in the diagram below.

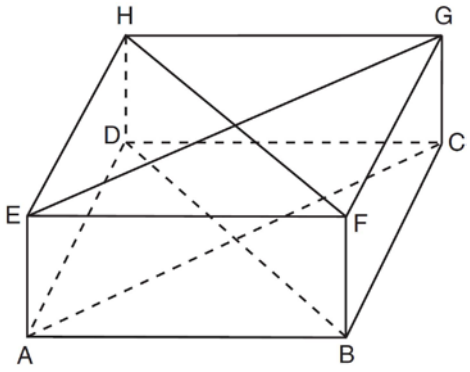


Which pair of edges are *not* coplanar?

1) $\overline{BF}$ and $\overline{CG}$
2) $\overline{BF}$ and $\overline{DH}$
3) $\overline{EF}$ and $\overline{CD}$
4) $\overline{EF}$ and $\overline{BC}$

Name: _____

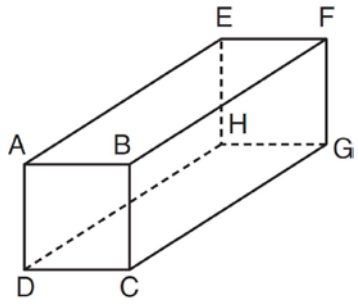
5 A rectangular prism is shown in the diagram below.



Which pair of line segments would always be both congruent and parallel?

1) $\overline{AC}$ and $\overline{FB}$
2) $\overline{FB}$ and $\overline{DB}$
3) $\overline{HF}$ and $\overline{AC}$
4) $\overline{DB}$ and $\overline{HF}$

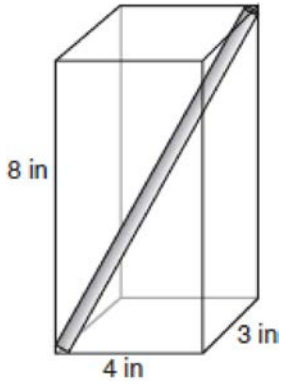
6 The diagram below represents a rectangular solid.



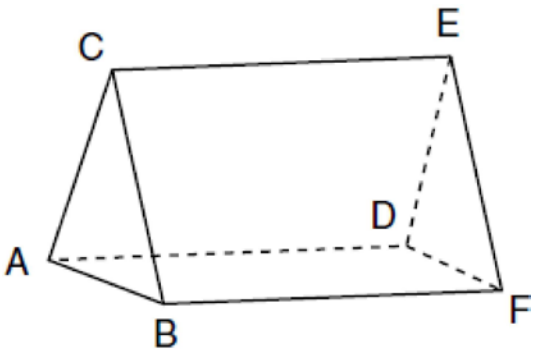
Which statement must be true?

1) $\overline{EH}$ and $\overline{BC}$ are coplanar
2) $\overline{FG}$ and $\overline{AB}$ are coplanar
3) $\overline{EH}$ and $\overline{AD}$ are skew
4) $\overline{FG}$ and $\overline{CG}$ are skew

7 A straw is placed into a rectangular box that is 3 inches by 4 inches by 8 inches, as shown in the accompanying diagram. If the straw fits exactly into the box diagonally from the bottom left front corner to the top right back corner, how long is the straw, to the *nearest tenth of an inch*?



8 The figure in the diagram below is a triangular prism.



Which statement must be true?

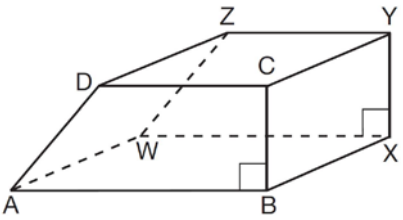
1) $\overline{DE} \cong \overline{AB}$
2) $\overline{AD} \cong \overline{BC}$
3) $\overline{AD} \parallel \overline{CE}$
4) $\overline{DE} \parallel \overline{BC}$

Name: _____

9 The bases of a right triangular prism are $\triangle ABC$ and $\triangle DEF$. Angles A and D are right angles, $AB = 6$, $AC = 8$, and $AD = 12$. What is the length of edge $\overline{BE}$?

1) 10
2) 12
3) 14
4) 16

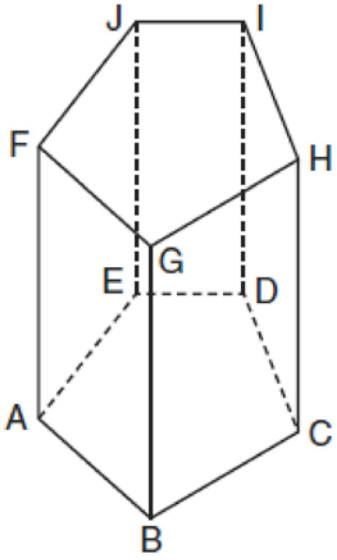
10 The bases of a prism are right trapezoids, as shown in the diagram below.



Which two edges do *not* lie in the same plane?

1) $\overline{BC}$ and $\overline{WZ}$
2) $\overline{AW}$ and $\overline{CY}$
3) $\overline{DC}$ and $\overline{WX}$
4) $\overline{BX}$ and $\overline{AB}$

11 The diagram below shows a right pentagonal prism.



Which statement is always true?

1) $\overline{BC} \parallel \overline{ED}$
2) $\overline{FG} \parallel \overline{CD}$
3) $\overline{FJ} \parallel \overline{IH}$
4) $\overline{GB} \parallel \overline{HC}$

12 A roll of candy is shown in the accompanying diagram.

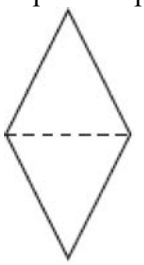
The shape of the candy is best described as a

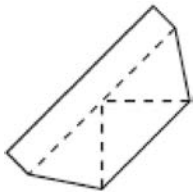
1) rectangular solid
2) pyramid
3) cone
4) cylinder

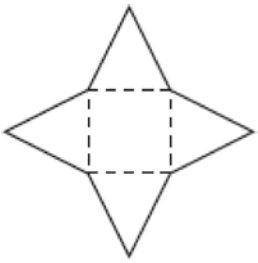
Name: _____

13 The lateral faces of a regular pyramid are composed of
1) squares
2) rectangles
3) congruent right triangles
4) congruent isosceles triangles

14 Which piece of paper can be folded into a pyramid?

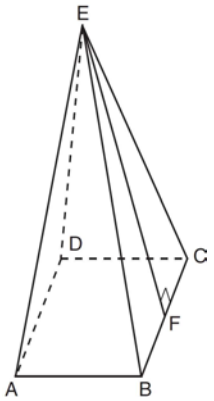
1) 

2) 

3) 

4) 

15 As shown in the diagram below, a right pyramid has a square base, $ABCD$, and $\overline{EF}$ is the slant height.

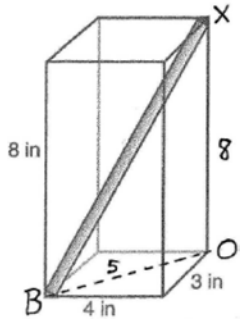


Which statement is *not* true?
1) $\overline{EA} \cong \overline{EC}$
2) $\overline{EB} \cong \overline{EF}$
3) $\triangle AEB \cong \triangle BEC$
4) $\triangle CED$ is isosceles

16 The bases of a right prism are triangles in which $\triangle MNP \cong \triangle RST$. If $MP = 9$, $\overline{MR} = 18$, and $MN = 12$, what is the length of $\overline{NS}$?
1) 9
2) 12
3) 15
4) 18

G.MG.A.1: Solids
Answer Section

1 ANS: 1 REF: 081508ge
2 ANS: 4 REF: 061503ge
3 ANS: 3 REF: 011105ge
4 ANS: 4 REF: 011406ge
5 ANS: 4 REF: 081401ge
6 ANS: 1 REF: 011221ge
7 ANS:
9.4. Looking at the bottom of the box two-dimensionally, diagonal $BO = 5$ because of the Pythagorean triple. Looking at the box three dimensionally, $\overline{BO}$ and $\overline{BX}$ are the legs of a triangle, with the straw as the hypotenuse, or $\overline{BX}$.



$5^2 + 8^2 = c^2$
$89 = c^2$
$9.4 \approx c$

REF: 060334a
8 ANS: 3
The lateral edges of a prism are parallel.

REF: fall0808ge
9 ANS: 2 REF: 081311ge
10 ANS: 1 REF: 011526ge
11 ANS: 4 REF: 061003ge
12 ANS: 4 REF: 089901a
13 ANS: 4 REF: 060904ge
14 ANS: 3 REF: 080215a
15 ANS: 2 REF: 061315ge
16 ANS: 4 REF: 011621ge