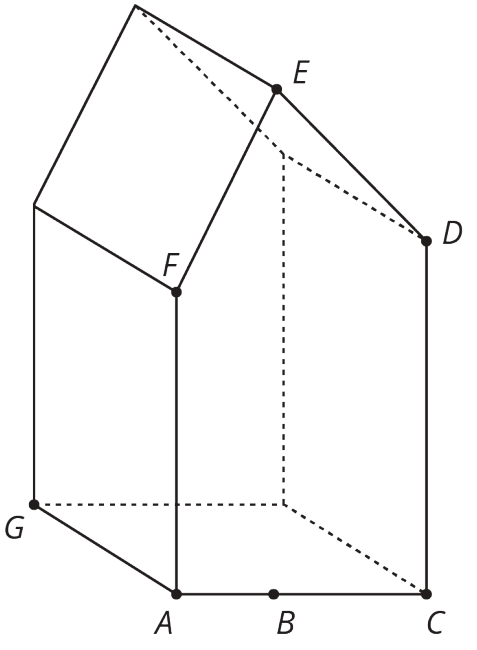
Unit 7 Lesson 13 Cumulative Practice Problems

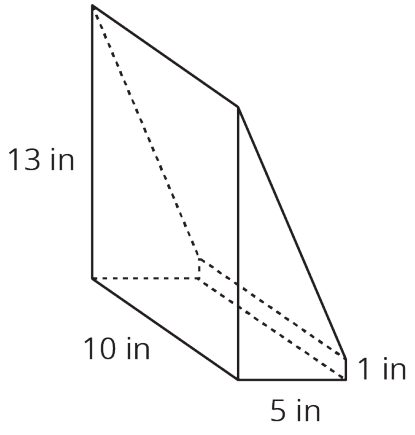
1. You find a crystal in the shape of a prism. Find the volume of the crystal.

   The point B is directly underneath point E, and the following lengths are known:

   - From A to B: 2 mm
   - From B to C: 3 mm
   - From A to F: 6 mm
   - From B to E: 10 mm
   - From C to D: 7 mm
   - From A to G: 4 mm



2. A rectangular prism with dimensions 5 inches by 13 inches by 10 inches was cut to leave a piece as shown in the image. What is the volume of this piece? What is the volume of the other piece not pictured?



3. A triangle has one side that is 7 cm long and another side that is 3 cm long.

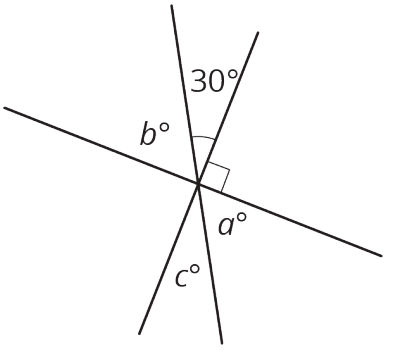
   a. Sketch this triangle and label your sketch with the given measures. (If you are stuck, try using a compass or cutting some straws to these two lengths.)

   b. Draw one more triangle with these measures that is not identical to your first triangle.

   c. Explain how you can tell they are not identical.

(From Unit 7, Lesson 9.)

4. Select **all** equations that represent a relationship between angles in the figure.



A. $90 - 30 = b$

B. $30 + b = a + c$

C. $a + c + 30 + b = 180$

D. $a = 30$

E. $a = c = 30$

F. $90 + a + c = 180$

(From Unit 7, Lesson 4.)

5. A mixture of punch contains 1 quart of lemonade, 2 cups of grape juice, 4 tablespoons of honey, and $\frac{1}{2}$ gallon of sparkling water. Find the percentage of the punch mixture that comes from each ingredient. Round your answers to the nearest tenth of a percent. (Hint: 1 cup = 16 tablespoons)

(From Unit 4, Lesson 9.)