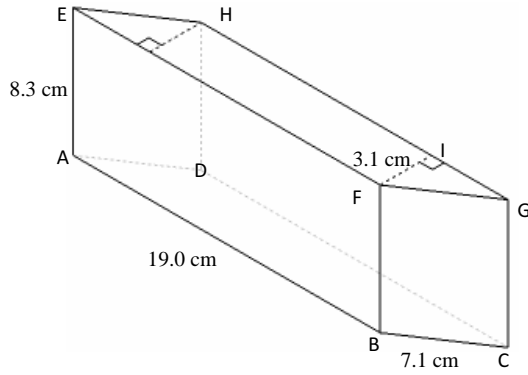


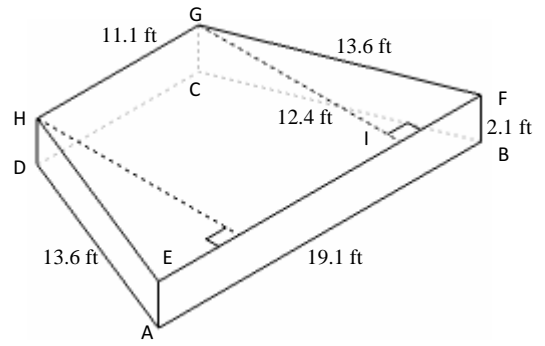
Volume and Surface Area of Right Prisms (G)

Instructions: Find the volume and surface area for each right prism.

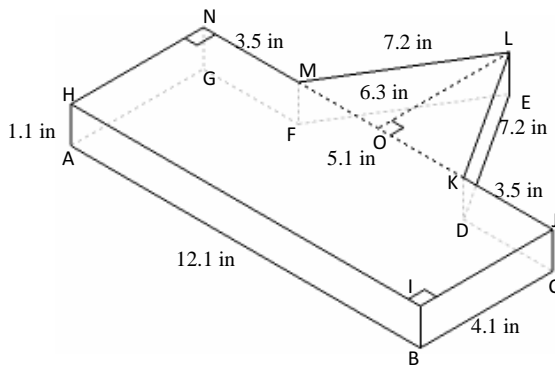
1)



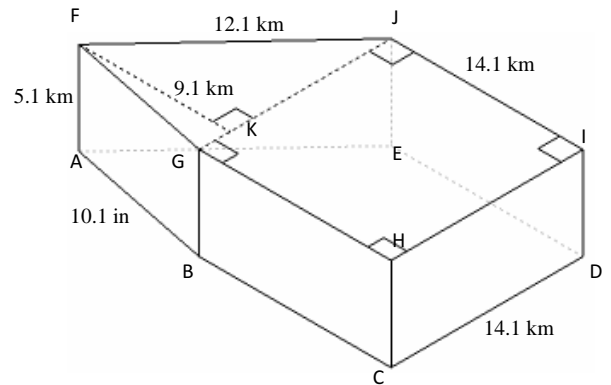
2)



3)



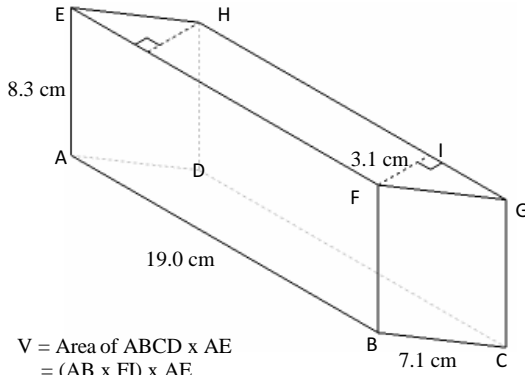
4)



Volume and Surface Area of Right Prisms Answer (G)

Instructions: Find the volume and surface area for each right prism.

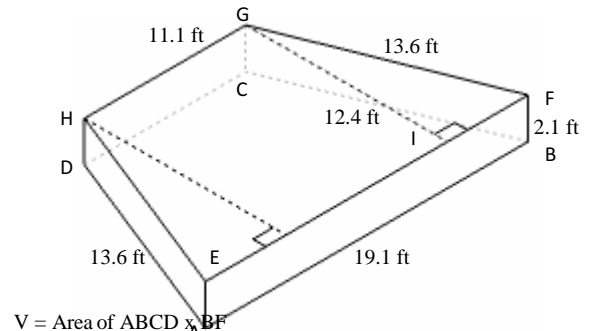
1)



$$\begin{aligned} V &= \text{Area of } ABCD \times AE \\ &= (AB \times FI) \times AE \\ &= (19.0 \times 3.1) \times 8.3 \\ &= 488.9 \text{ cm}^3 \end{aligned}$$

$$\begin{aligned} A &= (2 \times \text{Area of } ABCD) + (\text{perimeter of } ABCD \times AE) \\ &= (2 \times (AB \times FI)) + (((2 \times AB) + (2 \times BC)) \times AE) \\ &= (2 \times (19.0 \times 3.1)) + (((2 \times 19.0) + (2 \times 7.1)) \times 8.3) \\ &= 551.1 \text{ cm}^2 \end{aligned}$$

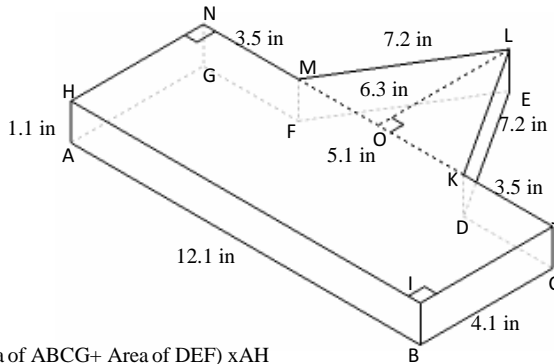
2)



$$\begin{aligned} V &= \text{Area of } ABCD \times BF \\ &= (0.5 \times (AB + CD) \times GI) \times ABF \\ &= (0.5 \times (19.1 + 11.1) \times 12.4) \times 2.1 \\ &= 393.2 \text{ ft}^3 \end{aligned}$$

$$\begin{aligned} A &= (2 \times \text{Area of } ABCD) + (\text{perimeter of } ABCD \times BF) \\ &= (2 \times (0.5 \times (AB + CD) \times GI)) + (((2 \times AD) + AB + CD) \times BF) \\ &= (2 \times (0.5 \times (19.1 + 11.1) \times 12.4)) + (((2 \times 13.6) + 19.1 + 11.1) \times 2.1) \\ &= 495.0 \text{ ft}^2 \end{aligned}$$

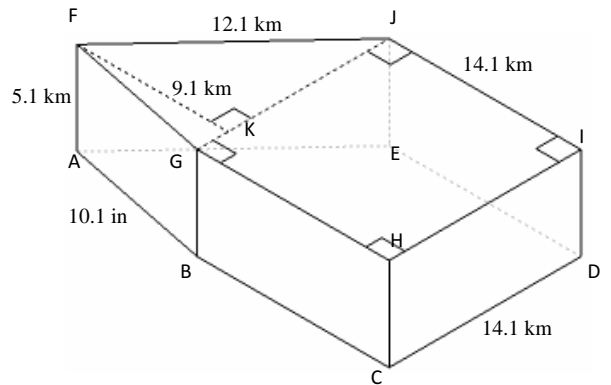
3)



$$\begin{aligned} V &= (\text{Area of } ABCG + \text{Area of } DEF) \times AH \\ &= ((AB \times BC) + (0.5 \times DF \times OL)) \times AH \\ &= ((12.1 \times 4.1) + (0.5 \times 5.1 \times 6.3)) \times 1.1 \\ &= 72.2 \text{ in}^3 \end{aligned}$$

$$\begin{aligned} A &= (2 \times (\text{Area of } ABCG + \text{Area of } DEF)) + (\text{perimeter of } ABCDEFG \times AH) \\ &= (2 \times ((AB \times BC) + (0.5 \times DF \times OL))) + ((AB + (2 \times BC) + (2 \times CD) + (2 \times DE)) \times AH) \\ &= (2 \times ((12.1 \times 4.1) + (0.5 \times 5.1 \times 6.3))) + ((12.1 + (2 \times 4.1) + (2 \times 3.5) + (2 \times 7.2)) \times 1.1) \\ &= 177.2 \text{ in}^2 \end{aligned}$$

4)



$$\begin{aligned} V &= (\text{Area of } FGJI + \text{Area of } GHI) \times AF \\ &= (HI)^2 + (0.5 \times GI \times KF) \times AF \\ &= (14.1)^2 + (0.5 \times 14.1 \times 9.1) \times 5.1 \\ &= 1341.1 \text{ m}^3 \end{aligned}$$

$$\begin{aligned} A &= (2 \times (\text{Area of } FGJI + \text{Area of } GHI)) + (\text{perimeter of } FGHIJ \times AF) \\ &= (2 \times ((HI)^2 + (0.5 \times GI \times KF))) + (((3 \times HI) + JI + FG) \times AF) \\ &= (2 \times ((14.1)^2 + (0.5 \times 14.1 \times 9.1))) + (((3 \times 14.1) + 12.1 + 10.1) \times 5.1) \\ &= 854.9 \text{ m}^2 \end{aligned}$$