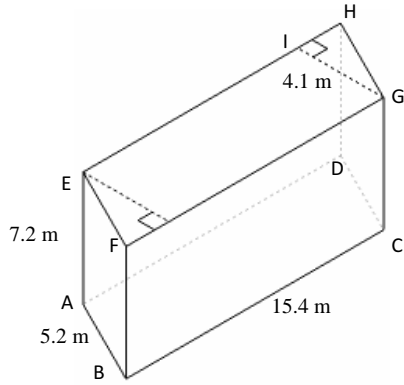


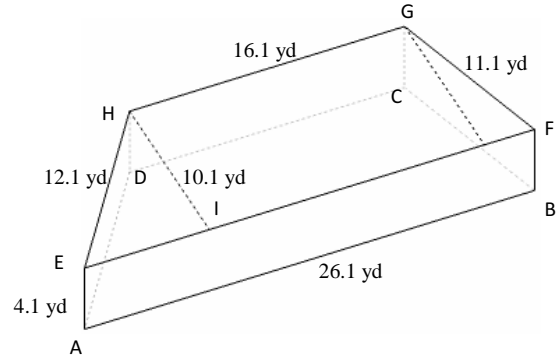
Volume and Surface Area of Right Prisms (I)

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

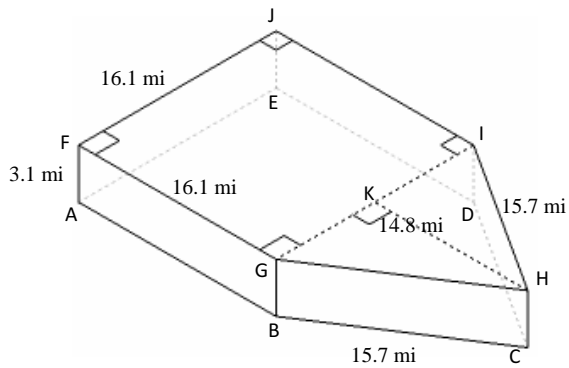
1)



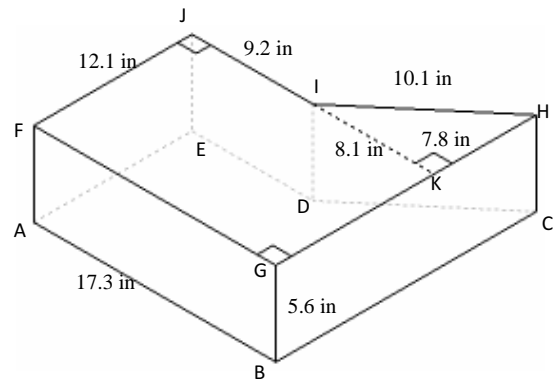
2)



3)



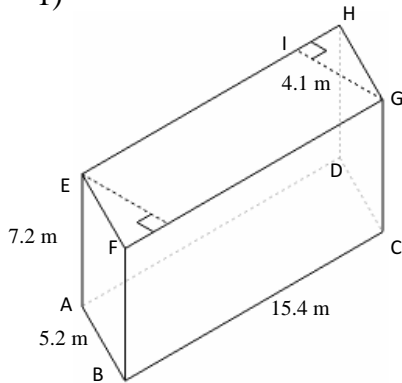
4)



Volume and Surface Area of Right Prisms Answer (I)

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

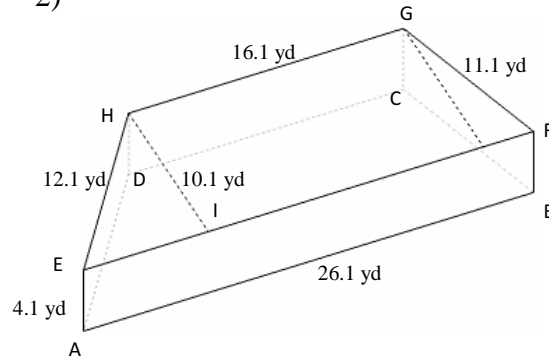
1)



$$\begin{aligned} V &= \text{Area of } ABCD \times AE \\ &= (BC \times GI) \times AE \\ &= (15.4 \times 4.1) \times 7.2 \\ &= 454.6 \text{ m}^3 \end{aligned}$$

$$\begin{aligned} A &= (2 \times \text{Area of } ABCD) + (\text{perimeter of } ABCD \times AE) \\ &= (2 \times (BC \times GI)) + ((2 \times AB) + (2 \times BC)) \times AE \\ &= (2 \times (15.4 \times 4.1)) + ((2 \times 5.2) + (2 \times 15.4)) \times 7.2 \\ &= 422.9 \text{ m}^2 \end{aligned}$$

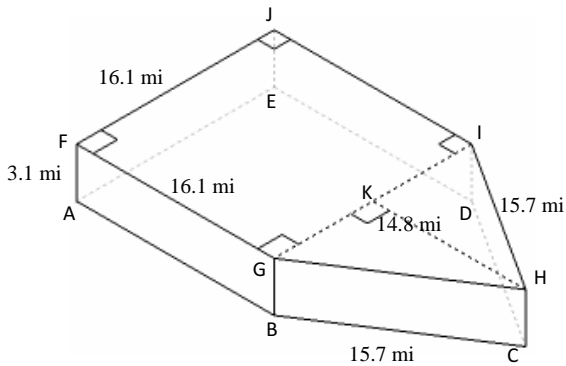
2)



$$\begin{aligned} V &= \text{Area of } ABCD \times AE \\ &= (0.5 \times (AB + CD)) \times HI \times AE \\ &= (0.5 \times (26.1 + 10.1)) \times 4.1 \\ &= 873.8 \text{ yd}^3 \end{aligned}$$

$$\begin{aligned} A &= (2 \times \text{Area of } ABCD) + (\text{perimeter of } ABCD \times AE) \\ &= (2 \times (0.5 \times (AB + CD) \times HI)) + ((AB + BC + CD + DA) \times AE) \\ &= (2 \times (0.5 \times (26.1 + 10.1) \times 4.1)) + ((26.1 + 11.1 + 10.1 + 12.1) \times 4.1) \\ &= 694.4 \text{ yd}^2 \end{aligned}$$

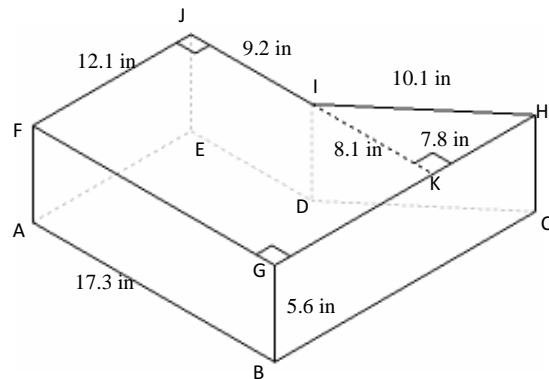
3)



$$\begin{aligned} V &= (\text{Area of } FGJI + \text{Area of } HIG) \times AF \\ &= ((FG)^2 + (0.5 \times IG \times HK)) \times AF \\ &= ((16.1)^2 + (0.5 \times 16.1 \times 14.8)) \times 3.1 \\ &= 1172.9 \text{ mi}^3 \end{aligned}$$

$$\begin{aligned} A &= (2 \times (\text{Area of } FGJI + \text{Area of } HIG)) + (\text{perimeter of } FGHI \times AF) \\ &= (2 \times ((FG)^2 + (0.5 \times IG \times HK))) + ((3 \times FG) + (2 \times GH)) \times AF \\ &= (2 \times ((16.1)^2 + (0.5 \times 16.1 \times 14.8))) + ((3 \times 16.1) + (2 \times 15.7)) \times 3.1 \\ &= 1003.8 \text{ mi}^2 \end{aligned}$$

4)



$$\begin{aligned} V &= (\text{Area of } FGKJ + \text{Area of } IHK) \times BG \\ &= ((FG \times FJ) + (0.5 \times KH \times IK)) \times BG \\ &= (17.3 \times 12.1) + (0.5 \times 7.8 \times 8.1) \times 5.6 \\ &= 1349.2 \text{ in}^3 \end{aligned}$$

$$\begin{aligned} A &= (2 \times (\text{Area of } FGKJ + \text{Area of } IHK)) + (\text{perimeter } FGKHI \times BG) \\ &= (2 \times ((FG \times FJ) + (0.5 \times KH \times IK))) + ((FG + 2 \times GK) + KH + IH + IJ) \times BG \\ &= (2 \times ((17.3 \times 12.1) + (0.5 \times 7.8 \times 8.1))) + ((17.3 + 2 \times 12.1) + 7.8 + 10.1 + 9.2) \times 5.6 \\ &= 866.0 \text{ in}^2 \end{aligned}$$