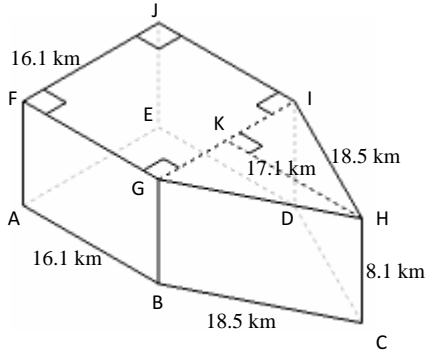


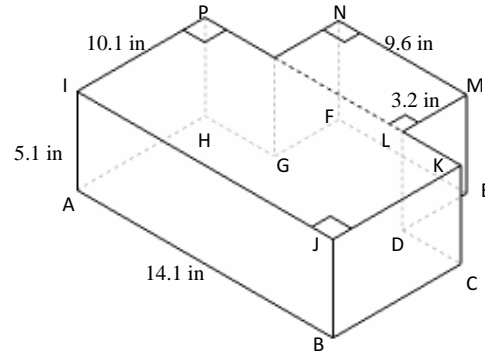
Volume and Surface Area of Composite Right Prisms (E)

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

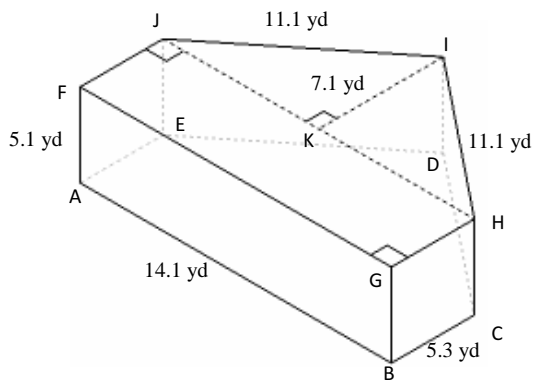
1)



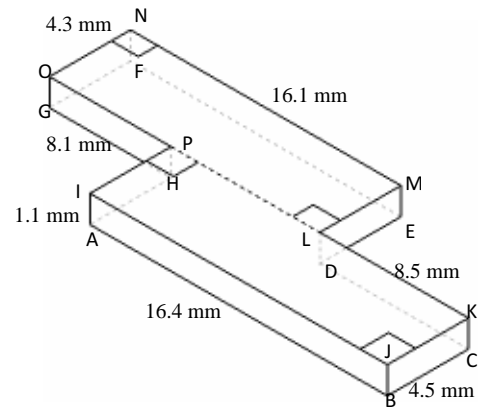
2)



3)



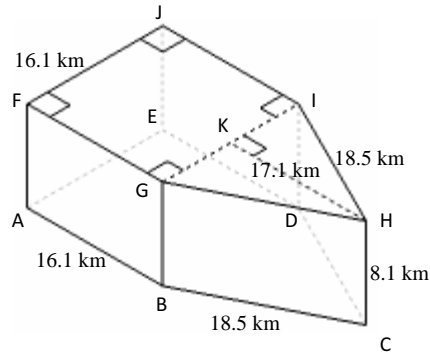
4)



Volume and Surface Area of Composite Right Prisms (E)

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

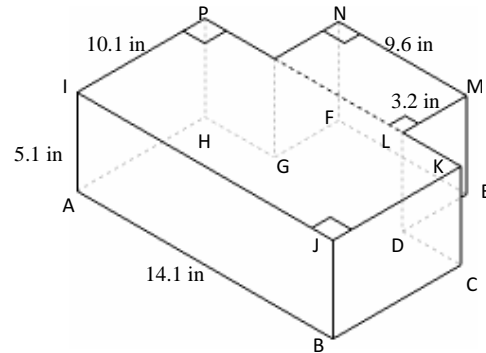
1)



$$\begin{aligned} V &= (\text{Area of FGJI} + \text{Area of HIG}) \times \text{CH} \\ &= ((\text{FG})^2 + (0.5 \times \text{IG} \times \text{HK})) \times \text{CH} \\ &= ((16.1)^2 + (0.5 \times 16.1 \times 17.1)) \times 8.1 \\ &= 3214.6 \text{ km}^3 \end{aligned}$$

$$\begin{aligned} A &= (2 \times (\text{Area of FGJI} + \text{Area of HIG})) + (\text{perimeter of FGHIJ} \times \text{CH}) \\ &= (2 \times ((\text{FG})^2 + (0.5 \times \text{IG} \times \text{HK}))) + ((3 \times \text{FG}) + (2 \times \text{GH})) \times \text{CH} \\ &= (2 \times ((16.1)^2 + (0.5 \times 16.1 \times 17.1))) + ((3 \times 16.1) + (2 \times 8.5)) \times 8.1 \\ &= 1484.7 \text{ km}^2 \end{aligned}$$

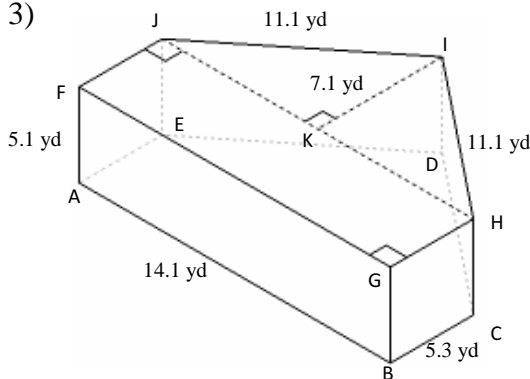
2)



$$\begin{aligned} V &= (\text{Area of ABCH} + \text{Area of LMNO}) \times \text{AI} \\ &= ((\text{AB} \times \text{BC}) + (\text{LM} \times \text{MN})) \times \text{AI} \\ &= ((14.1 \times 10.1) + (3.2 \times 9.6)) \times 5.1 \\ &= 883.0 \text{ in}^3 \end{aligned}$$

$$\begin{aligned} A &= (2 \times \text{Area of ABCH} + \text{Area of LMNO}) + (\text{perimeter of ABCDEFGH} \times \text{AI}) \\ &= (2 \times ((\text{AB} \times \text{BC}) + (\text{LM} \times \text{MN}))) + ((2 \times \text{AB}) + (2 \times \text{BC}) + (2 \times \text{LM})) \times \text{AI} \\ &= (2 \times ((14.1 \times 10.1) + (3.2 \times 9.6))) + ((2 \times 14.1) + (2 \times 10.1) + (2 \times 3.2)) \times 5.1 \\ &= 625.7 \text{ in}^2 \end{aligned}$$

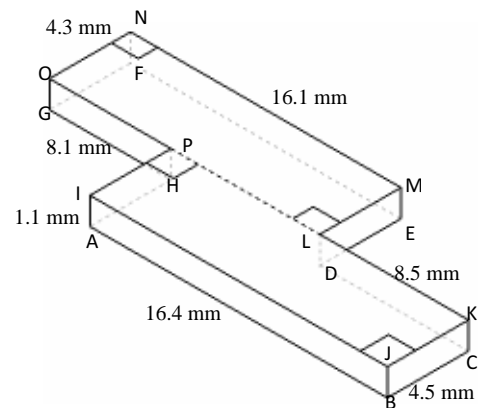
3)



$$\begin{aligned} V &= (\text{Area of FGHI} + \text{Area of HJI}) \times \text{AF} \\ &= (\text{FG} \times \text{GH}) + (0.5 \times \text{HJ} \times \text{IK}) \times \text{AF} \\ &= (14.1 \times 5.3) + (0.5 \times 14.1 \times 7.1) \times 5.1 \\ &= 636.4 \text{ yd}^3 \end{aligned}$$

$$\begin{aligned} A &= (2 \times (\text{Area of FGHI} + \text{Area of HJI})) + (\text{perimeter of FGHIJ} \times \text{AF}) \\ &= (2 \times (\text{FG} \times \text{GH}) + (0.5 \times \text{HJ} \times \text{IK})) + ((\text{FG} + (2 \times \text{GH}) + (2 \times \text{IJ})) \times \text{AF}) \\ &= (2 \times (14.1 \times 5.3) + (0.5 \times 14.1 \times 7.1)) + ((14.1 + (2 \times 5.3) + (2 \times 11.1)) \times 5.1) \\ &= 488.8 \text{ yd}^2 \end{aligned}$$

4)



$$\begin{aligned} V &= (\text{Area of ABCH} + \text{Area of DEFG}) \times \text{AI} \\ &= ((\text{AB} \times \text{BC}) + (\text{EF} \times \text{FG})) \times \text{AI} \\ &= ((16.4 \times 4.5) + (16.1 \times 4.3)) \times 1.1 \\ &= 157.3 \text{ mm}^3 \end{aligned}$$

$$\begin{aligned} A &= (2 \times (\text{Area of ABCH} + \text{Area of DEFG})) + (\text{perimeter of ABCDEFGH} \times \text{AI}) \\ &= (2 \times ((\text{AB} \times \text{BC}) + (\text{EF} \times \text{FG}))) + (\text{AB} + (2 \times \text{CB}) + \text{CD} + (2 \times \text{FG}) + \text{GH}) \times \text{AI} \\ &= (2 \times ((16.4 \times 4.5) + (16.1 \times 4.3))) + (16.4 + (2 \times 4.5) + 8.5 + (2 \times 4.3) + 8.1) \times 1.1 \\ &= 359.4 \text{ mm}^2 \end{aligned}$$