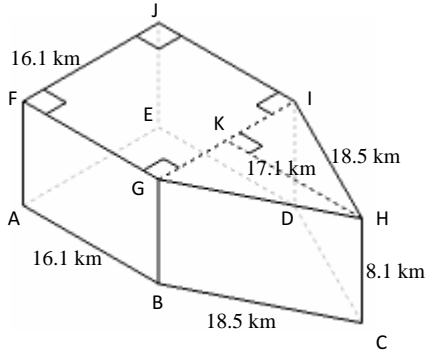


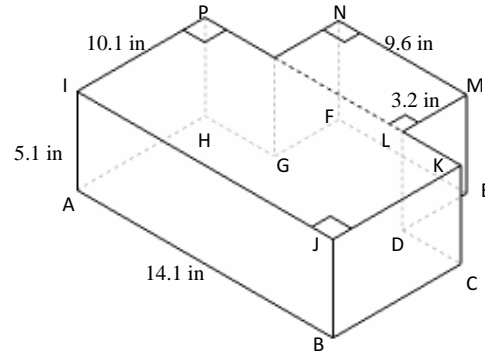
Volume and Surface Area of Composite Right Prisms (E)

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

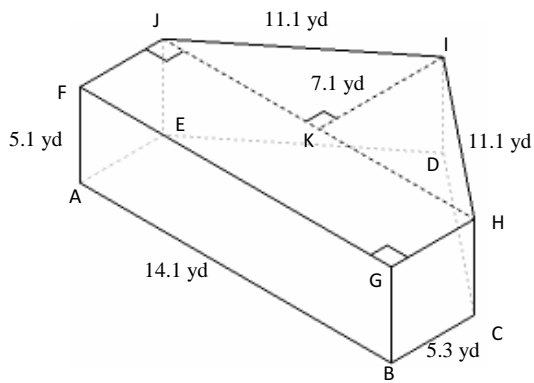
1)



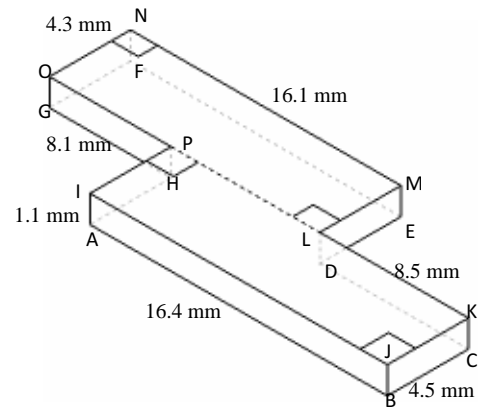
2)



3)



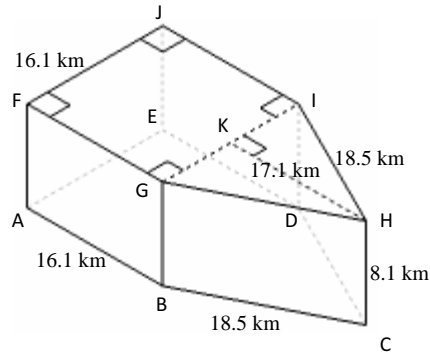
4)



Volume and Surface Area of Composite Right Prisms (E)

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

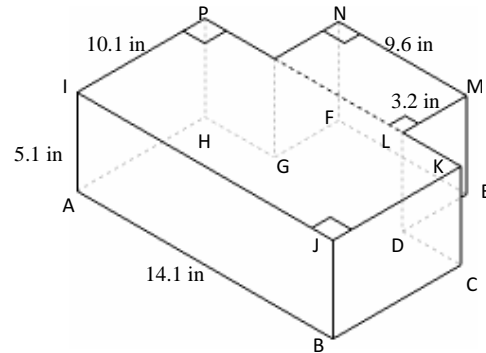
1)



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

$$\begin{aligned} A &= (2 \times (\text{Area of FGJI} + \text{Area of HIG})) + (\text{perimeter of FGHIJ} \times CH) \\ &= (2 \times ((FG)^2 + (0.5 \times IG \times HK))) + ((3 \times FG) + (2 \times GH)) \times CH \\ &= (2 \times ((16.1)^2 + (0.5 \times 16.1 \times 17.1))) + ((3 \times 16.1) + (2 \times 18.5)) \times 8.1 \\ &= 1484.7 \text{ km}^2 \end{aligned}$$

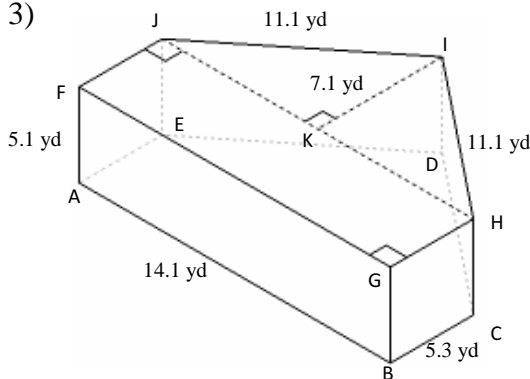
2)



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

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

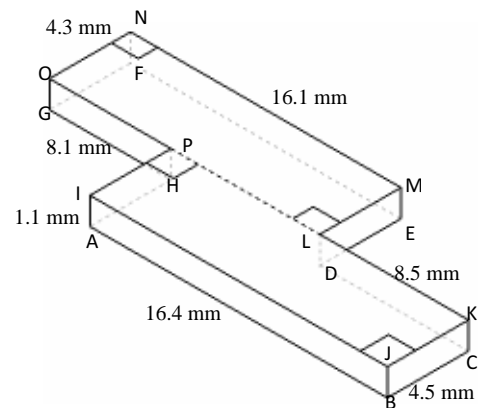
3)



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

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

4)



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

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