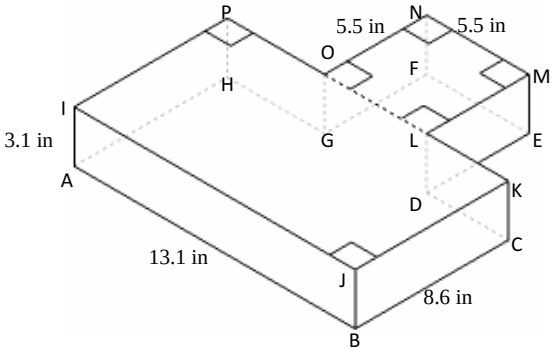
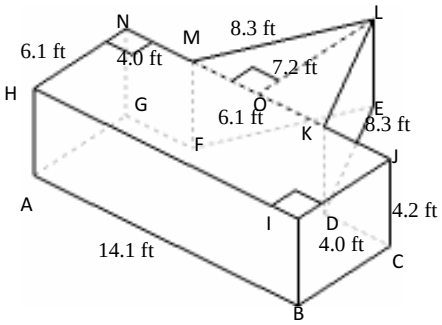
Volume and Surface Area of Composite Right Prisms (F)

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

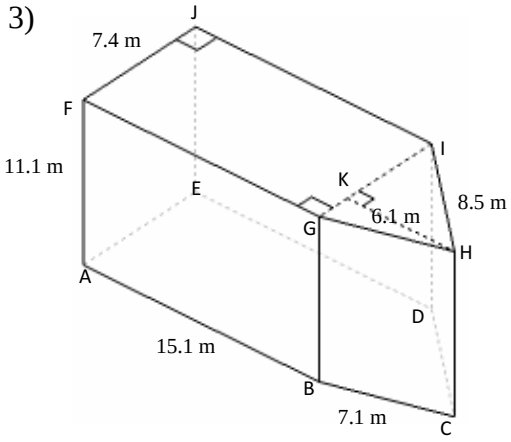
1)



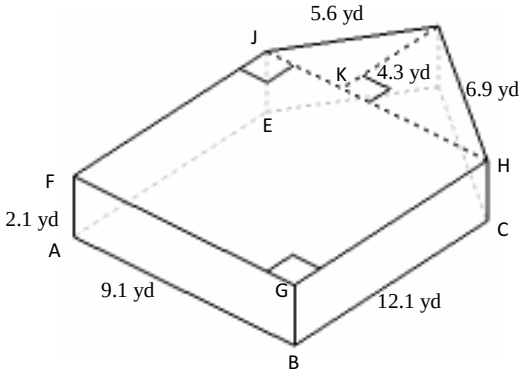
2)



3)



4)



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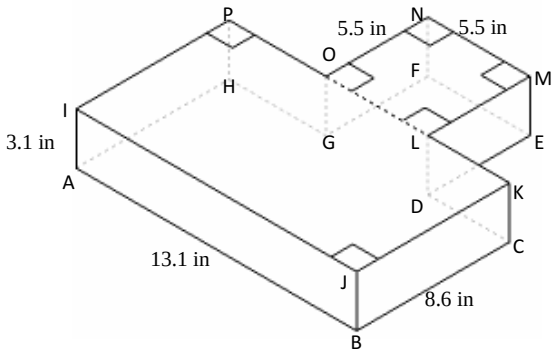
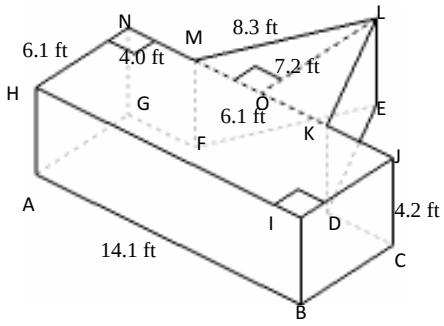


V = (Area of ABCH + Area of LMNO)x AI
= ((ABx BC)+$(MN)^2$)x AI
= ((13.1x 8.6)+($5.5)^2$)x 3.1
= 443.0 in^3

A = (2x Area of ABCH + Area of LMNO))+
(perimeter of ABCDEFGHx AI)
= (2x((ABx BC)+$(MN)^2$)+(((2x AB)+(2x BC)+(2x MN))xAI)
= (2x((13.1x 8.6)+($5.5)^2$))+(((2x13.1)+(2x 8.6)+(2x5.5))x3.1)
= 454.5 in^2

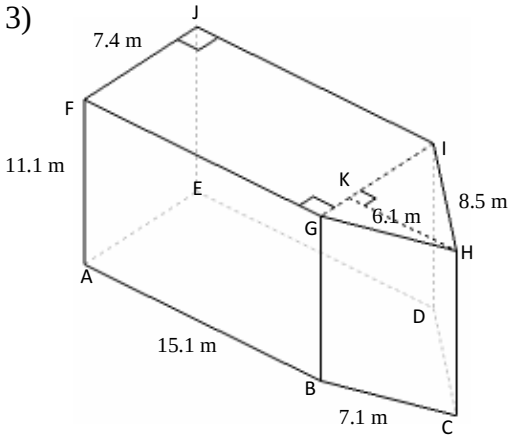
2)



V =(Area of ABCG+ Area of DEF) xCJ
= (ABxBC)+ (0.5xDFxOL) x CJ
= (14.1x6.1)+ (0.5x6.1x7.2) x 4.2
= 178.2 ft^3

A =(2x(Area of ABCG+ Area of DEF))+
(perimeter of ABCDEFG x CJ)
= (2x ((ABxBC)+ (0.5xDFxOL)))+
((AB+(2xBC)+(2xCD)+(2xDE))x CJ)
= (2x ((14.1x6.1)+(0.5x6.1x7.2)))+((14.1+(2x6.1)+(2x4.0)+(2x8.3))x 4.2)
= 429.7 ft^2

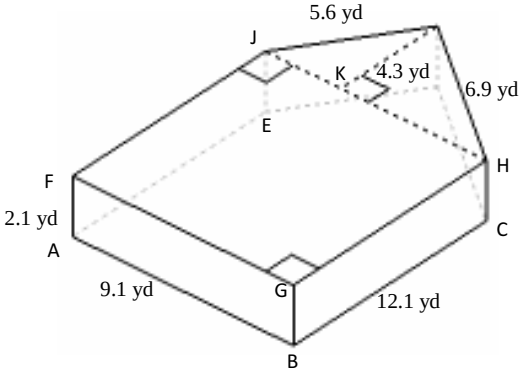
3)



V = (Area of FGIJ+ Area of GHI) x AF
= ((FGxGI)+(0.5x GIxKH)) x AF
= ((15.1x7.4) + (0.5x 7.4x6.1)) x 11.1
= 1490.8 m^3

A =(2x(Area of FGIJ+ Area of GHI))+(perimeter of FGHIJxAF)
=(2x(FGxGI)+(0.5xGIxKH))+(((2x FG)+ GH+HI+FJ)x AF)
= (2x(15.1x7.4)+(0.5x 7.4x6.1))+(((2x 15.1)+ 7.1+8.5+7.4)x 11.1)
= 859.1 m^2

4)



V = (Area of FGHJ+ Area of HIJ) x AF
= ((FGxGH)+(0.5x HJxIK)) x AF
= ((9.1x12.1) + (0.5x 9.1x4.3)) x 2.1
= 272.3 yd^3

A =(2x(Area of FGHJ+ Area of HIJ))+(perimeter of FGHIJxAF)
=(2x(FGxGH)+(0.5x HJxIK))+((FG+(2x GH)+HI+IJ)x AF)
= (2x((9.1x12.1) + (0.5x 9.1x4.3))+((9.1+(2x12.1)+6.9+ 5.6)x 2.1)
= 355.5 yd^2