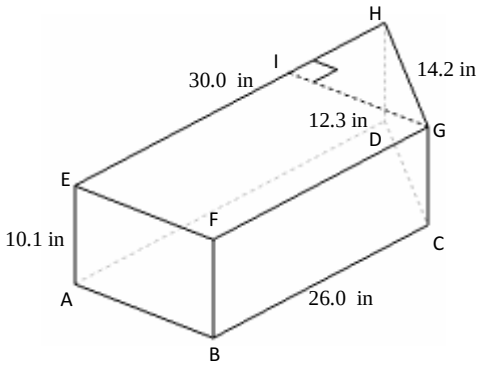
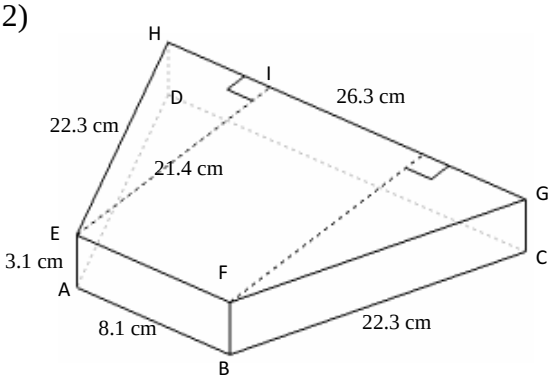
Volume and Surface Area of Trapezoid Prisms (C)

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

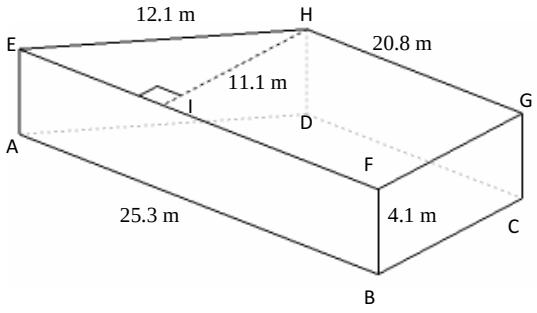
1)



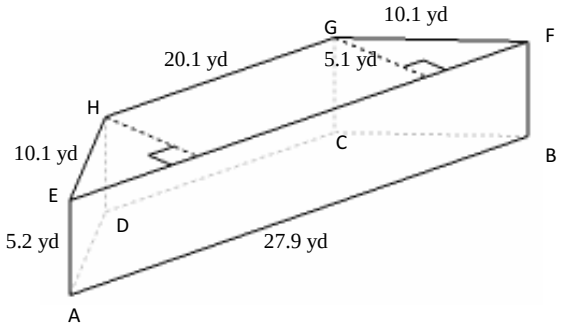
2)



3)



4)



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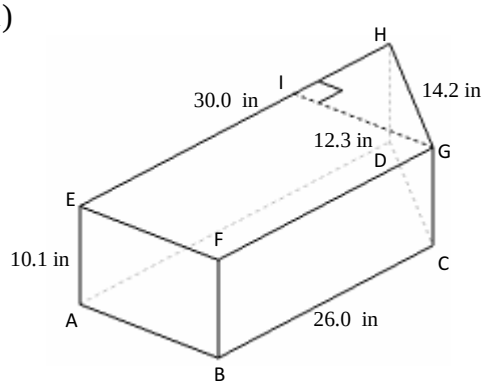
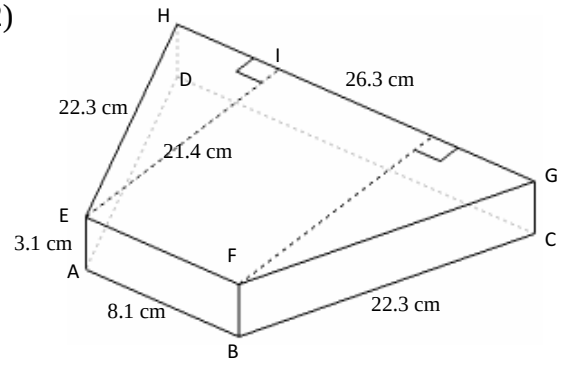


V = Area of ABCD x AE
= (0.5x(AD + BC)x GI) x AE
= (0.5x(30.0 +26.0) x12.3)x 10.1
= 3478.4 in^3

A = (2x Area of ABCD)+(perimeter of ABCD x AE)
= (2x (0.5x(AD + BC)x GI)) + ((AB+BC+CD+DA) x AE)
= (2x (0.5x(30.0+26.0) x12.3)+((12.3+26.0+14.2+30.0) x10.1)
= 1522.1 in^2

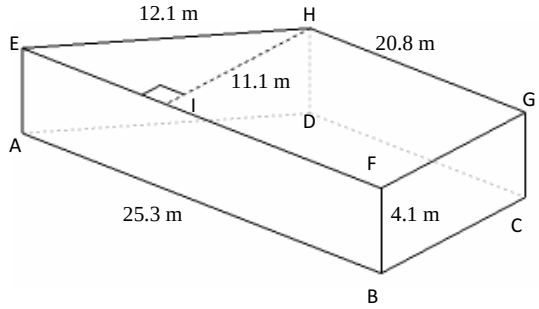
2)



V = Area of ABCD x AE
= (0.5x(AB + CD)x EI) x AE
= (0.5x(8.1 + 26.3)x21.4) x 3.1
= 1141.0 cm^3

A = (2x Area of ABCD)+(perimeter of ABCD x AE)
= (2x (0.5x(AB + CD)x EI)) + (((2x AD)+AB+CD) x AE)
= (2x (0.5x(8.1 +26.3)x21.4) + (((2x 22.3)+8.1+26.3) x3.1)
= 981.1 cm^2

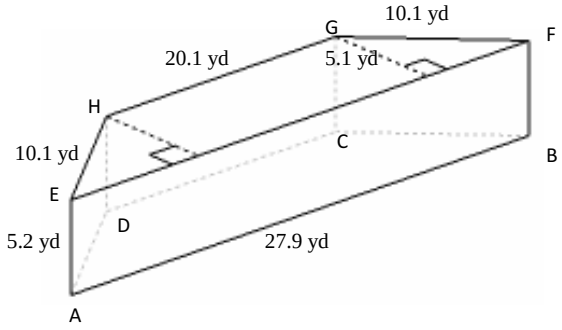
3)



V = Area of ABCD x BF
= (0.5x(AB+ CD)x HI) x BF
= (0.5x(25.3 +20.8) x11.1)x 4.1
= 1049.0 m^3

A = (2x Area of ABCD)+(perimeter of ABCD x BF)
= (2x (0.5x(AB +CD)x HI)) + ((AB+BC+CD+DA) x BF)
= (2x (0.5x(25.3+20.8) x11.1)+((25.3+11.1+20.8+12.1) x4.1)
= 795.8 m^2

4)



V = Area of ABCD x AE
= (0.5x(AB + CD)x GI) x AE
= (0.5x(27.9 + 20.1) x5.1)x 5.2
= 636.5 yd^3

A = (2x Area of ABCD)+(perimeter of ABCD x AE)
= (2x (0.5x(AB + CD)x GI)) + (((2x AD)+AB+CD) x AE)
= (2x (0.5x(27.9 +20.1) x5.1)+ (((2x 10.1)+27.9+20.1) x5.2)
= 599.4 yd^2