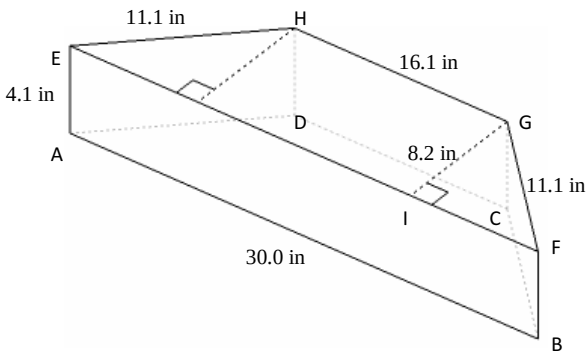
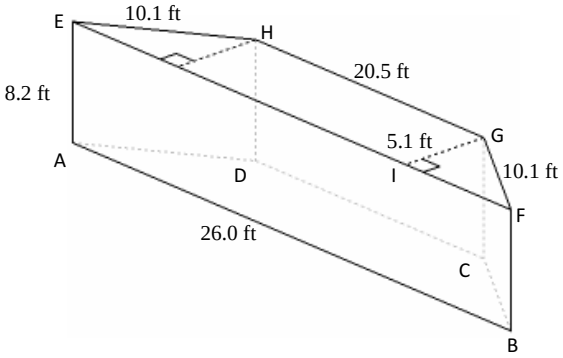
Volume and Surface Area of Trapezoid Prisms (D)

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

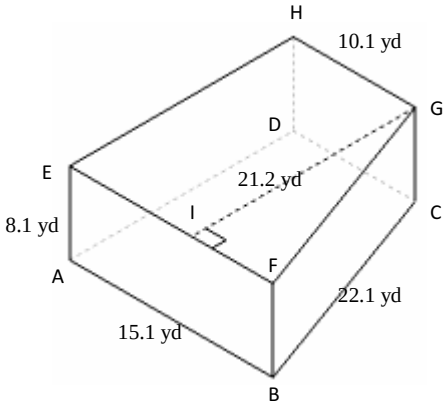
1)



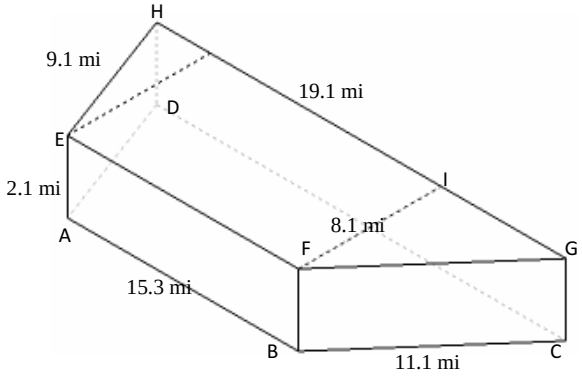
2)



3)



4)



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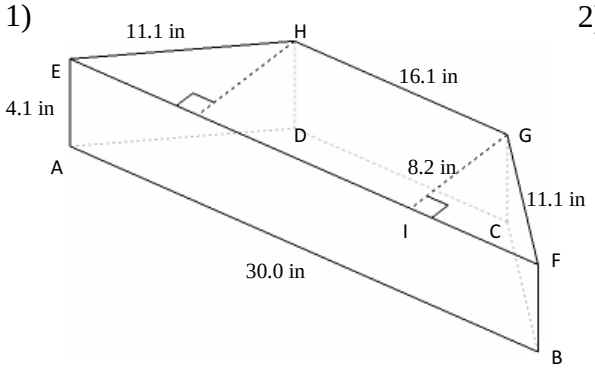
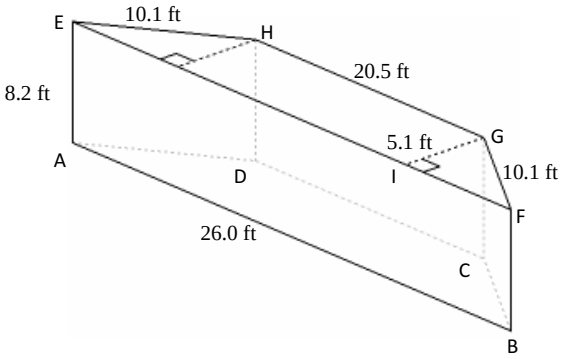


V = Area of ABCD x AE
= (0.5x(AB + CD)x GI) x AE
= (0.5x(30.0 + 16.1) x8.2) x 4.1
= 774.9 in^3

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(30.0 +16.1)x8.2) + (((2x 11.1)+30.0+16.1) x4.1)
= 658.1 in^2

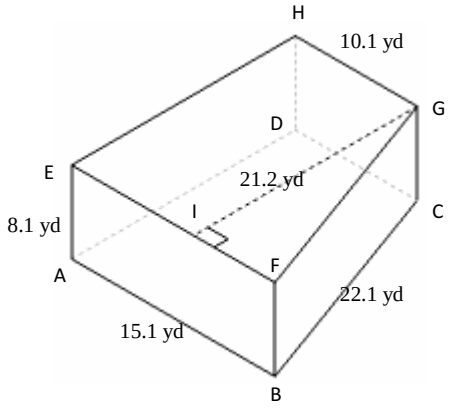
2)



V = Area of ABCD x AE
= (0.5x(AB + CD)x GI) x AE
= (0.5x(26.0 + 20.5) x5.1) x 8.2
= 972.3 ft^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(26.0 +20.5)x5.1) + (((2x 10.1)+26.0+20.5) x8.2)
= 784.1 ft^2

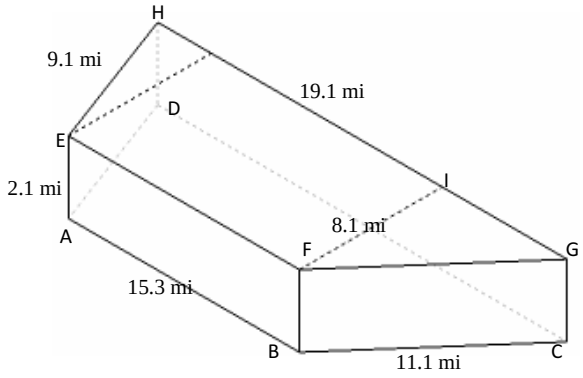
3)



V = Area of ABCD x AE
= (0.5x(AB+ CD)x GI) x AE
= (0.5x(15.1 +10.1) x21.2)x 8.1
= 2163.7 yd^3

A = (2x Area of ABCD)+(perimeter of ABCD x AE)
= (2x (0.5x(AB +CD)x GI)) + ((AB+BC+CD+DA) x AE)
= (2x (0.5x(15.1+10.1) x21.2)+((15.1+22.1+10.1+21.1) x8.1)
= 1088.3 yd^2

4)



V = Area of ABCD x AE
= (0.5x(AB+ CD)x FI) xAE
= (0.5x(15.3 +19.1) x8.1)x 2.1
= 292.6 mi^3

A = (2x Area of ABCD)+(perimeter of ABCD x AE)
= (2x (0.5x(AB +CD)x FI)) + ((AB+BC+CD+DA) x AE)
= (2x (0.5x(15.3+19.1) x8.1)+((15.3+11.1+19.1+9.1) x2.1)
= 393.3 mi^2