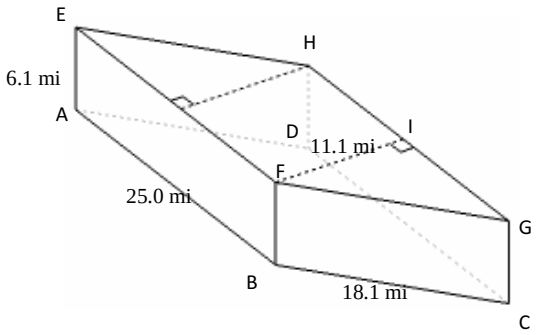
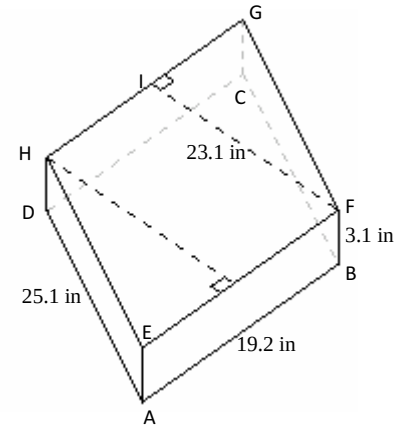
Volume and Surface Area of Parallelogram Prisms (B)

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

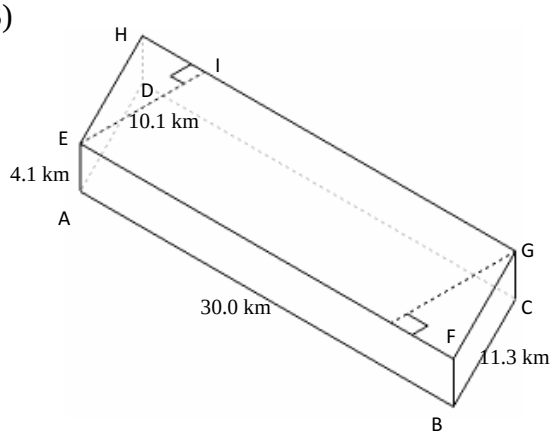
1)



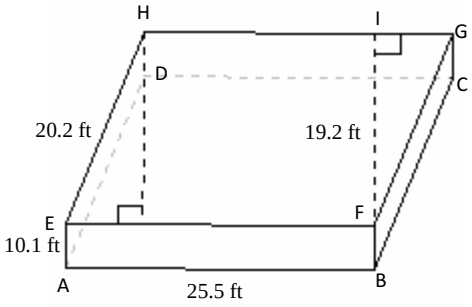
2)



3)



4)



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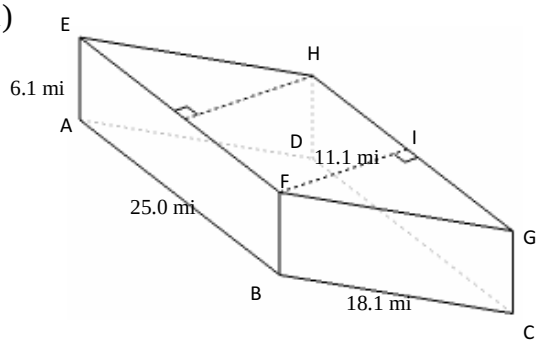
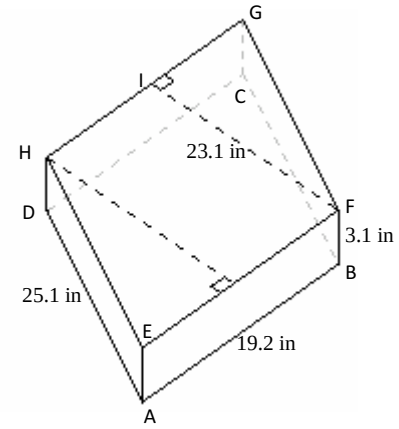
1)



V = Area of ABCD x AE
= (AB x FI) x AE
= (25.0 x 11.1) x 6.1
= 1692.8 mi^3

A = (2x Area of ABCD)+(perimeter of ABCD x AE)
= (2x (AB x FI)) + (((2x AB)+(2x BC)) x AE)
= (2x (25.0 x 11.1)) + (((2x 25.0)+(2x 18.1)) x 6.1)
= 1080.8 mi^2

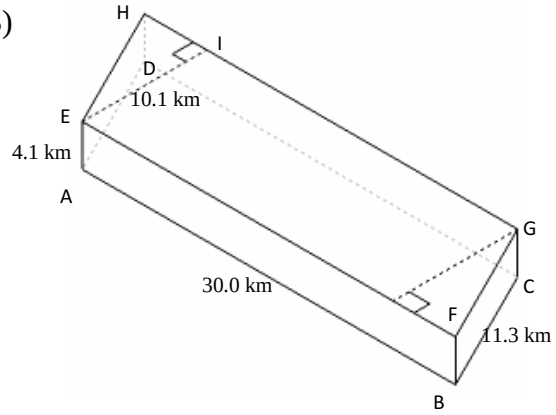
2)



V = Area of ABCD x AE
= (AB x FI) x AE
= (19.2 x 23.1) x 3.1
= 1374.9 in^3

A = (2x Area of ABCD)+(perimeter of ABCD x AE)
= (2x (AB x FI)) + (((2x AB)+(2x EH)) x AE)
= (2x (19.2 x 23.1)) + (((2x 19.2)+(2x 25.1)) x3.1)
= 1161.7 in^2

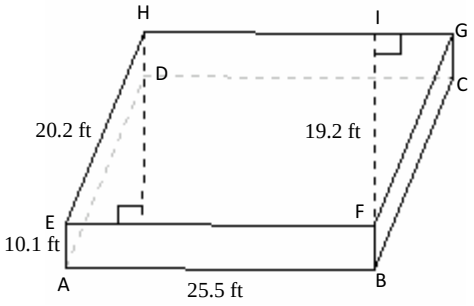
3)



V = Area of ABCD x AE
= (AB x EI) x AE
= (30.0 x10.1) x 4.1
= 1242.3 km^3

A = (2x Area of ABCD)+(perimeter of ABCD x AE)
= (2x (AB x EI)) + (((2x AB)+(2x BC)) x AE)
= (2x (30.0 x10.1)) + (((2x 30.0)+(2x 11.3)) x4.1)
= 944.7 km^2

4)



V = Area of ABCD x AE
= (AB x FI) x AE
= (25.5 x 19.2) x 10.1
= 4945.0 ft^3

A = (2x Area of ABCD)+(perimeter of ABCD x AE)
= (2x (AB x FI)) + (((2x AB)+(2x EH)) x AE)
= (2x (25.5 x 19.2)) + (((2x 25.5)+(2x20.2)) x10.1)
= 1902.3 ft^2