R-Value Practice Problems

1. Using the R-Value Lookup Table determine the U-Factor for the 2x4 Wall Assemblies below. Use Winter Conditions.

R-VALUE for 2x4 WALL at STUD AREAS	
Component	**R-Value**
Inside Air Film	
5/8" Gypsum Board	
2x4 Nominal (3 1/2") Stud Framing	
1x4 Nominal (3/4") Horizontal Sheathing Boards	
1/2" Plywood Sheathing	
60 Min. Building Paper	
1/2" Cedar Bevel Lapped Siding	
Exterior Air Film	
TOTAL R-VALUE (STUD WALL AREA)	
U-FACTOR	

R-VALUE for 2x4 WALL at CAVITY AREAS	
Component	**R-Value**
Inside Air Film	
5/8" Gypsum Board	
Cellulose Blown Insulation	
1x4 Nominal (3/4") Horizontal Sheathing Boards	
1/2" Plywood Sheathing	
60 Min. Building Paper	
1/2" Cedar Bevel Lapped Siding	
Exterior Air Film	
TOTAL R-VALUE (STUD WALL AREA)	
U-FACTOR	

R-VALUE for 2x4 WALL at CAVITY AREAS	
Component	**R-Value**
Inside Air Film	
5/8" Gypsum Board	
Fiberglass Blown Insulation	
1x4 Nominal (3/4") Horizontal Sheathing Boards	
1/2" Plywood Sheathing	
60 Min. Building Paper	
1/2" Cedar Bevel Lapped Siding	
Exterior Air Film	
TOTAL R-VALUE (STUD WALL AREA)	
U-FACTOR	

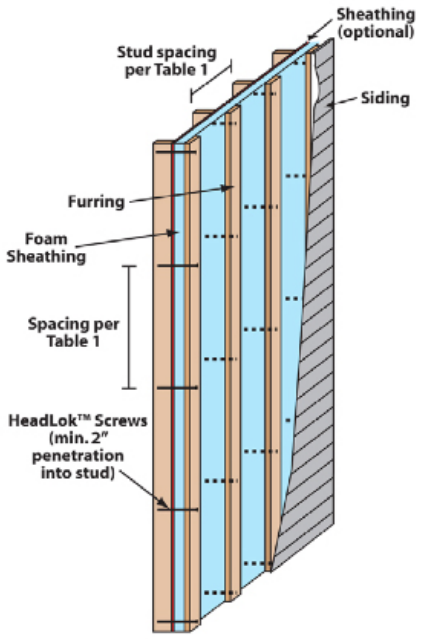

Figure 1a: Illustration of Exterior Wall Covering Assembly with Vertically-Oriented Furring

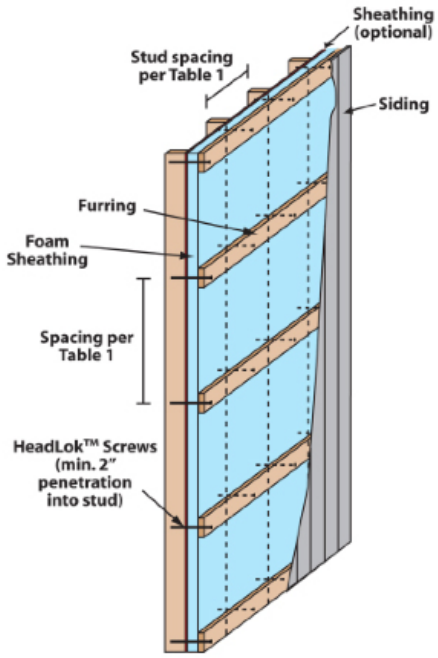

Figure 1b: Illustration of Exterior Wall Covering Assembly with Horizontally-Oriented Furring