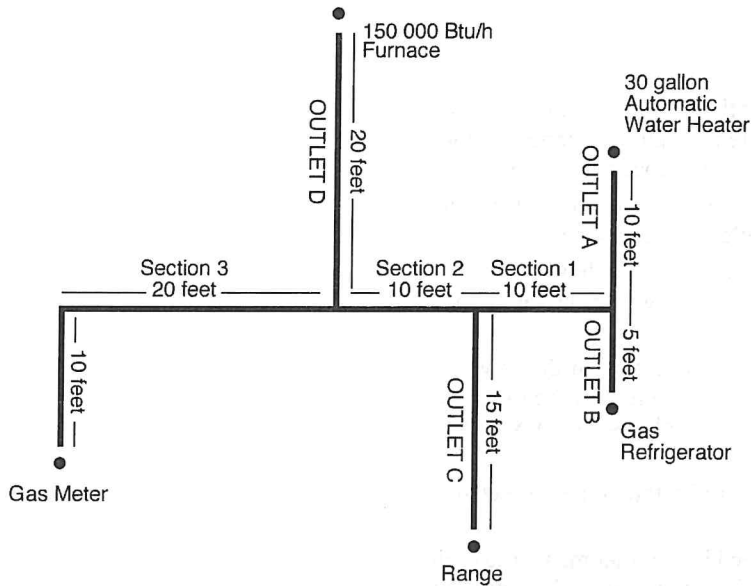


FIGURE 1215.1.1
EXAMPLE ILLUSTRATING USE OF TABLE 1208.4.1 AND TABLE 1215.2(1)

Problem: Determine the required pipe size of each section and outlet of the piping system shown in Figure 1215.1.1. Gas to be used has a specific gravity of 0.60 and 1100 British thermal units (Btu) per cubic foot (0.0114 kW•h/L), delivered at 8 inch water column (1.9 kPa) pressure.



For SI units: 1 foot = 304.8 mm, 1 gallon = 3.785 L, 1000 British thermal units per hour = 0.293 kW, 1 cubic foot per hour = 0.0283 m³/h

Solution:

- (1) Maximum gas demand of Outlet A —
 32 cubic feet per hour (0.91 m³/h) (from Table 1208.4.1).
 Maximum gas demand of Outlet B —
 3 cubic feet per hour (0.08 m³/h) (from Table 1208.4.1).
 Maximum gas demand of Outlet C —
 59 cubic feet per hour (1.67 m³/h) (from Table 1208.4.1).
 Maximum gas demand of Outlet D —
 136 cubic feet per hour (3.85 m³/h) [150 000 Btu/hour (44 kW) divided by 1100 Btu per cubic foot (0.0114 kW•h/L)].
- (2) The length of pipe from the gas meter to the most remote outlet (Outlet A) is 60 feet (18 288 mm).
- (3) Using the length in feet column row marked 60 feet (18 288 mm) in Table 1215.2(1):
 Outlet A, supplying 32 cubic feet per hour (0.91 m³/h), requires ½ of an inch (15 mm) pipe.
 Section 1, supplying Outlets A and B, or 35 cubic feet per hour (0.99 m³/h) requires ½ of an inch (15 mm) pipe.
 Section 2, supplying Outlets A, B, and C, or 94 cubic feet per hour (2.66 m³/h) requires ¾ of an inch (20 mm) pipe.
 Section 3, supplying Outlets A, B, C, and D, or 230 cubic feet per hour (6.51 m³/h), requires 1 inch (25 mm) pipe.
- (4) Using the column marked 60 feet (18 288 mm) in Table 1215.2(1) [no column for actual length of 55 feet (16 764 mm)]:
 Outlet B supplying 3 cubic feet per hour (0.08 m³/h), requires ½ of an inch (15 mm) pipe.
 Outlet C, supplying 59 cubic feet per hour (1.67 m³/h), requires ½ of an inch (15 mm) pipe.
- (5) Using the column marked 60 feet (18 288 mm) in Table 1215.2(1):
 Outlet D, supplying 136 cubic feet per hour (3.85 m³/h), requires ¾ of an inch (20 mm) pipe.