

## DUFF QUIZ

- How many British thermal units (BTU's) are required to raise one pound of water 1 degree fahrenheit?
  - 212
  - 100
  - 1
  - 513
- One cubic foot of water weighs?
  - 1 lb
  - 8.33 lbs
  - 7.48 lbs
  - 62.4 lbs
- One gallon of water weighs?
  - 1 lb
  - 8.33 lbs
  - 7.48 lbs
  - 62.4 lbs
- How many gallons are contained in a cubic foot of water?
  - 2.5
  - 3.33
  - 8.33
  - 7.48
- How many BTU's are in 1 kilowatt-hour?
  - 212
  - 3,412
  - 1,000
  - 62.4
- If you mix 180-degree hot water with 40-degree cold water to obtain 140-degree tempered water, what percentage of the mixed water is hot water?
  - 88.3%
  - 71.5%
  - 75.2%
  - 50.0%
- If you have a storage tank that is 30 inches in diameter by 60 inches high, how many gallons of water will the storage tank hold?
  - 183.62
  - 1,800
  - 120.5
  - 100
- How many BTU's are in one cubic foot of natural gas?
  - 212
  - 1,000
  - 2,500
  - 3,200
- How many BTU's are in one cubic foot of propane?
  - 212
  - 1,000
  - 2,500
  - 3,200
- In gas water heaters, scale deposits on the bottom of the water heater insulate the bottom of the water heater from the burner assembly. How much more fuel does a water heater use if it has 1/2 inch of scale on its bottom?
  - 15%
  - 20%
  - 39%
  - 70%

$V = 3.142 \times R^2 \times H$   
231

### ANSWERS:

1c, 2d, 3b, 4d, 5b, 6b, 7a, 8b, 9c, 10d

**THIS IS PROPER PIPING FOR MOST BRANDS OF MIXING VALVES**

### POWERS EQUIPMENT

MV430 Hydroguard

\*Note: On intermittent (flow) domestic water systems, add electric thermostat to stop pump when return water temperature exceeds Hydroguard set point. Locate pump and thermostat after last tap point. Pump should be sized for following capacities:

- 431 Hydroguard - 5 GPM
- 432 Hydroguard - 8 GPM
- 433 Hydroguard - 10 GPM
- 434 Hydroguard - 12 GPM

**POWERS**  
PROCESS CONTROLS  
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