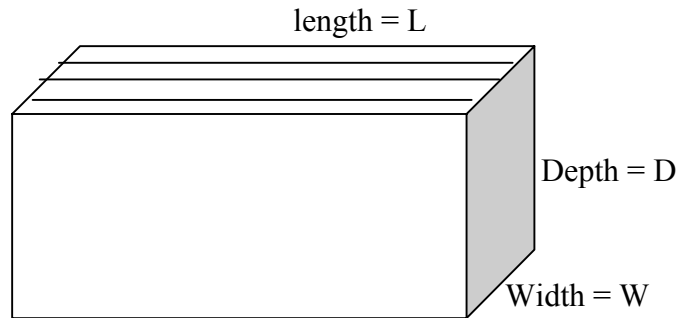


Painting the Pool



The length, width, and depth of a swimming pool are L , W , and D , as shown. The pool has r lanes (the diagram shows $r = 4$). Paint for the bottom and sides costs P dollars per gallon. Pool paint covers S square feet per gallon. Lane rope material costs R dollars per foot. Water volume is 7.48 gallons per cubic foot. Water itself costs H dollars per 1000 gallons.

- (1) Write an algebraic expression giving the volume of the pool in cubic feet: _____
- (2) Write an algebraic expression giving the volume of the pool in gallons: _____
- (3) Write an algebraic expression giving the cost of the water in the pool in dollars, if it is filled to the top :

Simplify the algebraic expression in (3) for water cost as much as possible: _____

- (4) Give the meaning in words of this expression: $L(r-1)R =$ _____
- (5) Give the meaning in words of this expression: $\frac{LW}{S}P =$ _____
- (6) Give an expression for the total area to be painted: _____
- (7) Give an expression for the cost of the total area (bottom and sides) to be painted: _____
- (8) Give a meaning that could be attached to this expression: $\frac{2LD+2WD}{LW} =$ _____

- (9) Calculate and give the meaning (and units!) for this number: $\frac{1}{7.48} =$ _____
- (10) Give the meaning (and units!) for this number: $\frac{1}{H} =$ _____