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CPT 232

Exam 1

9/24/11

**Data Dictionary**

**Analysis**

Outputs: user\_name, mower\_name length, width, house\_size, property\_size, total\_size\_of\_lawn, pay\_per\_hour, cut\_time\_minutes, cut\_time\_hours, gas\_consumed, total\_fee, burn\_rate, cut\_speed

**Name** **Type** **Description**

user\_name string name of person using program

mower\_name string name of person mowing lawn

length int length in feet of property rounded up from actual

width int width in feet of property rounded up from actual

house\_size double constant size of 40% of lawn

total\_size\_of\_lawn double size of lawn in square feet

pay\_per\_hour double the amount paid per hour to the kid

cut\_time\_minutes double length of time it takes to cut lawn in minutes

cut\_time\_hours double length of time it takes to cut lawn in hours

gas\_consumed double total amount of gas consumed

property\_size int total size of property in square feet

total\_fee double total cost of pay in dollars and cents per hour

burn\_rate double constant fuel burn rate of 1.2 gallons per hour

cut\_speed int constant speed of cutting 2 square feet per second

break\_time double 5 minutes every 1 hour, 12 percent every hour

new\_minutes double time it takes to cut lawn in minutes with added breaks

break\_pay double total cost of pay per hour with added breaks

**Calculate 9 values**

property\_size = length \* width

total\_size\_of\_lawn = property\_size - (house\_size \* property\_size)

cut\_time\_minutes = (total\_size\_of\_lawn / cut\_speed) / 60

cut\_time\_hours = cut\_time\_minutes / 60

gas\_consumed = cut\_time\_hours \* burn\_rate

total\_fee = pay\_per\_hour \* cut\_time\_hours

break\_time = cut\_time\_minutes / 12

new\_minutes = break\_time + cut\_time\_minutes

break\_pay = (new\_minutes / 60) \* pay\_per\_hour

**Flowchart**

Start

Enter user\_name, mower\_name, length, width, pay\_per\_hour

property\_size = length \* width

total\_size\_of\_lawn = property\_size - (house\_size \* property\_size)

cut\_time\_minutes = (total\_size\_of\_lawn / cut\_speed) / 60

cut\_time\_hours = cut\_time\_minutes / 60

gas\_consumed = cut\_time\_hours \* burn\_rate

total\_fee = pay\_per\_hour \* cut\_time\_hours

break\_time = cut\_time\_minutes / 12

break\_pay = (new\_minutes / 60) \* pay\_per\_hour

Display user\_name, mower\_name, total\_size\_of\_lawn, cut\_time\_minutes, gas\_consumed, total\_fee, new\_minutes, break\_pay

Stop

new\_minutes = break\_time + cut\_time\_minutes