

```
/*Painting Estimator Pseudocode*/
```

```
tax = 13%
```

```
wallHeight = 3
```

```
roomColour[3] = {'Pale Walnut', 'Pale Walnut', 'Pale Walnut'}
```

```
//Scenario 2: Pale Walnut, Coffee Beige, Dark Mocha
```

```
//Room-1 is 0 in array
```

```
//Room-2 is 1 in array
```

```
//Room-3 is 2 in array
```

```
floorArea[3] = {64, 32, 90} //this can be used for ceiling as well
```

```
roomPerimeter[3] = {32, 24, 42} //set the perimeter of each room
```

```
//calculates the total number of tape rolls needed
```

```
/******
```

```
/*arrays for various measurements, including windows, doors, closet door, and skylight*/
```

```
windows [3]
```

```
windows.num = 2
```

```
windows.width = {1,1,2}
```

```
window.height = 1.5
```

```
doors[3]
```

```
doors.num = 1
```

```
doors.height = 2
```

```
doors.width = 1
```

```
closetDoor[3]
```

```
closetDoor.num = {0,0,1}
```

```
closetDoor.height = {0,0,2}
```

```
closetDoor.width = {0,0,2.5}
```

```
skylight[3]
```

```
skylight.length = {0,2,0}
```

```
skylight.width = {0,2,0}
```

```
for (x=0; x < floorArea.length; x++){
```

```
    ceilingBorder += roomPerimeter[x]
```

```
    totalWindowBorder += windows[x].num*((2*windowHeight) + windows[x].width)
```

```
    totalDoorBorder += door[x].num*((2*door[x].height) + door[x].width)
```

```
    totalClosetDoor += door[x].num*((2*closetDoor[x].height) + closetDoor[x].width)
```

```
    totalSkylightBorder += 2*(skylight[x].length + skylight[x].width)
```

```
}
```

```
floorBorder = ceilingBorder//ceiling and floor will have the same borders
```

```
totalTapeLength = totalDoorBorder + totalSkylightBorder + totalWindowBorder +
```

```
ceilingBorder + floorBorder + totalClosetDoor
```

```
tapeRoll = totalTapeLength/50 //round up
```

```

//calculate the number of ceiling paint cans
/*****/
for (x=0; x < floorArea.length; x++){
    ceilingArea += floorArea[x]-(skylight.length[x]*skylight.width[x])//first coat
    ceilingArea += floorArea[x]-(skylight.length[x]*skylight.width[x])//second coat
}

if ((ceilingArea)%10) !=0{
    if(ceilingArea)%10 > 5
        ceilingPaint.large++
    else
        ceilingPaint.small++
}
ceilingPaint.large += (ceilingArea)/10        //rounded down

//calculate the number of base-coat paint cans
/*****/
/*get the length of each item (windows, wall, doors, closet) so that they can be
multiplied by its height to calculate the area*/
for (x=0; x < floorArea.length; x++){
    windowLengthTotal += windows[x].num*windowLength[x]
    wallLengthTotal += roomPerimeter[x]
    doorLengthTotal += door[x].width*door[x].num
    closetDoorLengthTotal += closetDoor[x].width*closetDoor[x].num
}

wallArea = (wallLengthTotal*wallHeight) - (windowLengthTotal*windowHeight) -
(doorLengthTotal*door.height) - (closetDoorLengthTotal*closetDoor.height)

if ((wallArea)%12) !=0{
    if(wallArea)%12 > 6
        basePaint.large++
    else
        basePaint.small++
}

basePaint.large += wallArea/12        //round down

//calculate the number of finishing coat paint cans
/*****/
//This loop makes sure that the cans of paint counted only account for colours that match
for(x=0; x<colourOptions.length;x++){
    for (y=0; y<floorArea.length;y++){
        if (roomColour[y] == colourOptions[x])//compare the room colors to database
            finishingWallArea += roomPerimeter[y]*2
    }
    if ((finishingWallArea)%15) !=0{
        if(finishingWallArea)%7.5 != 0
            finishingPaint.small++
        else
            finishingPaint.large++
    }
}

```

```

    }
    if ((finishingWallArea)%15) !=0{
        if(finishingWallArea)%15 > 7.5
            finishingPaint.large++
        else
            finishingPaint.small++
    }
    finishingPaint.lage += finishingWallArea/15 //round down
    finishingWallArea = 0
}

```

```

printf:
Supplies Needed:
Supplies      Cost (supplies*cost*tax, rounded to 2 decimal):
tapeRolls      ->*3.50*tax
ceilingPaint.small ->*18.25*tax
ceilingPaint.large ->*30.75*tax
basePaint.small ->*25.25*tax
basePaint.large ->*40.75*tax
finishingPaint.small ->*30.25*tax
finishingPaint.large ->*47.75*tax
Total          sum(of above)

```

| Item | Price | Tax | Part-1 | Part-2 | Cost (Part 1) | Cost (Part 1) |
|-------------------------|---------|---------|--------|--------|------------------------------|-----------------------------|
| Tape Rolls | \$3.50 | 113.00% | 5 | | \$17.5 | |
| Ceiling Paint (small) | \$18.25 | | 1 | | \$18.25 | |
| Ceiling Paint (large) | \$30.75 | | 36 | | \$1,107 | |
| Base Paint (small) | \$25.25 | | 0 | | \$0.00 | |
| Base Paint (large) | \$40.75 | | 23 | | \$937.25 | |
| Finishing Paint (small) | \$30.25 | | 1 | 2 | \$30.25 | \$60.50 |
| Finishing Paint (large) | \$47.75 | | 36 | 36 | \$1,719 | \$1,719 |
| Total Cost | | | | | \$3829.25*tax = \$4327.05 | \$3859.5*tax = \$4361.24 |