

Name _____ **Skin Cancer in Your State 2009** <http://www2.epa.gov/sunwise/skin-cancer-facts-your-state> and <http://www.infoplease.com/us/states/population>

State	New Melanoma Cases	Population	Ratio
Alabama	1300	4,833,722	
Alaska	100	735,132	
Arizona	1460	6,626,624	
Arkansas	400	2,959,373	
California	9080	38,332,521	
Colorado	1260	5,268,367	
Connecticut	1060	3,596,080	
Delaware	220	925,749	
Florida	4920	19,552,860	
Georgia	2040	9,992,167	
Hawaii	380	1,404,054	
Idaho	360	1,612,136	
Illinois	2480	12,882,135	
Indiana	1000	6,570,902	
Iowa	910	3,090,416	
Kansas	610	2,893,957	
Kentucky	1260	4,395,295	
Louisiana	700	4,625,470	
Maine	410	1,328,302	
Maryland	1530	5,928,814	
Massachusetts	2000	6,692,824	
Michigan	2240	9,895,622	
Minnesota	1050	5,420,380	
Mississippi	400	2,991,207	
Missouri	1100	6,044,171	
Montana	250	1,015,165	
Nebraska	378 (in 2011)	1,868,516	
Nevada	480	2,790,136	
New Hampshire	400	1,323,349	
New Jersey	1700	8,899,339	
New Mexico	460	2,085,287	
New York	4200	19,651,127	
North Carolina	2600	9,848,060	
North Dakota	100	723,393	
Ohio	2900	11,570,808	
Oklahoma	700	3,850,568	
Oregon	700	3,930,065	
Pennsylvania	3400	12,773,801	
Rhode Island	200	1,051,511	
South Carolina	1100	4,774,839	
South Dakota	200	844,877	
Tennessee	1900	6,495,978	
Texas	3400	26,448,193	
Utah	400	2,900,872	
Vermont	200	626,630	
Virginia	2400	8,260,405	
Washington	1900	6,971,406	
West Virginia	400	1,854,304	
Wisconsin	1000	5,742,713	
Wyoming	130	582,658	

Step Three: Creating the choropleth map

Look at the numerical chart for the 50 states. Color each state according to your key for each group. Make sure that you include the numbers for each group in your key.

Step Four: Analyzing the results

1. What does this map tell you? *The _____ of melanoma cases per _____ of the 50 states.*

2. Which state has the most cases per population? _____

3. Which state has the least cases per population? _____

4. What pattern(s) do you see in this map? _____

5. Is your state a high-risk state? _____

6. Why do you think it is or isn't? _____

Skin Cancer in Your State 2009 **Answer Key**

State	New Melanoma Cases	Population	Ratio
Alabama	1300	4,833,722	1:3718
Alaska	100	735,132	1:7351
Arizona	1460	6,626,624	1:4539
Arkansas	400	2,959,373	1:7398
California	9080	38,332,521	1:4221
Colorado	1260	5,268,367	1:4181
Connecticut	1060	3,596,080	1:3392
Delaware	220	925,749	1:4207
Florida	4920	19,552,860	1:3974
Georgia	2040	9,992,167	1:4898
Hawaii	380	1,404,054	1:3695
Idaho	360	1,612,136	1:4478
Illinois	2480	12,882,135	1:5194
Indiana	1000	6,570,902	1:6571
Iowa	910	3,090,416	1:3396
Kansas	610	2,893,957	1:4744
Kentucky	1260	4,395,295	1:3488
Louisiana	700	4,625,470	1:6608
Maine	410	1,328,302	1:3240
Maryland	1530	5,928,814	1:3875
Massachusetts	2000	6,692,824	1:3346
Michigan	2240	9,895,622	1:4418
Minnesota	1050	5,420,380	1:5162
Mississippi	400	2,991,207	1:7478
Missouri	1100	6,044,171	1:5495
Montana	250	1,015,165	1:4061
Nebraska	378 (in 2011)	1,868,516	1:4943
Nevada	480	2,790,136	1:5813
New Hampshire	400	1,323,349	1:3308
New Jersey	1700	8,899,339	1:5235
New Mexico	460	2,085,287	1:4533
New York	4200	19,651,127	1:4679
North Carolina	2600	9,848,060	1:3788
North Dakota	100	723,393	1:7233
Ohio	2900	11,570,808	1:3990
Oklahoma	700	3,850,568	1:4072
Oregon	700	3,930,065	1:5614
Pennsylvania	3400	12,773,801	1:3757
Rhode Island	200	1,051,511	1:5258
South Carolina	1100	4,774,839	1:4340
South Dakota	200	844,877	1:4224
Tennessee	1900	6,495,978	1:3418
Texas	3400	26,448,193	1:7778
Utah	400	2,900,872	1:7252
Vermont	180	626,630	1:3181
Virginia	2400	8,260,405	1:3441
Washington	1900	6,971,406	1:3669
West Virginia	400	1,854,304	1:4635
Wisconsin	1000	5,742,713	1:5742
Wyoming	130	582,658	1:4481

Making a Choropleth Map: U.S. Melanoma Cases 2009 **Answer Key**

Choropleth maps display information by areas. Choros means “place” and pleth means “value.” A choropleth map presents information about a single variable such as income, crops, or population density. The information should be combined into 4-6 groups. Color or pattern will then be used on the map to show the value of each area.

Step One: Doing the Math

Look at the list of numerical information. What are the highest number and the lowest number in the data?

Highest: 9424

Lowest: 3240

Subtract the lowest from the highest:

Highest 7778 (A)

– Lowest 3240 (B)

= Difference 4538 (C)

Divide the difference into 4 groups:

Difference \div 4

Difference(C) 4538 \div 4 = (D) 1134.5

Add the number from (D) to the lowest number from the chart (B):

(D) 4538 + (B) 3240 = (E) 4374.52

Group 1 will be between (B) 3240 and (E) 4374.5

Add 1 to (E) = 4375.5 = (F) (F) 4375.5 + (D) 1134.5 = (G) 5510

Group 2 will be between (F) 4375.5 and (G) 5510

Add 1 to (G) = 5511 = (H) (H) 5511 + (D) 1134.5 = (I) 6645.5

Group 3 will be between (H) 5511 and (I) 6645.5

Add 1 to (I) = 6646.5 = (J) (J) 6646.5 + (D) 1134.5 = (K) 7781

Group 4 will be between (J) 6646.5 and (K) 7781

Step Two: Selecting the colors for each group

Group 1 will be between 3240 and 4374.52 Color: _____

Group 2 will be between 4375.5 and 5510 Color: _____

Group 3 will be between 5511 and 6645.5 Color: _____

Group 4 will be between 6646.5 and 7781 Color: _____

Step Three: Creating the choropleth map

Look at the numerical chart for the 50 states. Color each state according to your key for each group. Make sure that you include the numbers for each group in your key.

Step Four: Analyzing the results

1. What does this map tell you? The rate of melanoma cases per population of the 50 states.
2. Which state has the most cases per population? Maine
3. Which state has the least cases per population? Texas
4. What pattern(s) do you see in this map? **Accept reasonable answers.**
5. Is your state a high-risk state? Yes or No
6. Why do you think it is or isn't? **Accept reasonable answers.**