

HCCM3 Cultural City Designer

U1

WS 6

You are to design your own city. Your city should represent a specific culture. You might want to pick a culture that you family is part of, or one that you are interested in finding out more about. **Your city will have a name and population which must be placed at the top of your paper.** The streets and buildings should be named (you may want to create a legend if it will not be obvious from the name which type of building it is).

I. Your city must have the following and be correct to receive full credit.

1. At least 5 parallel streets (each street must be named.)
2. At least 2 transversal streets (they may be parallel, but do not have to be.)

II. The following buildings must be placed as directed. Remember that buildings need to be on one corner only. They cannot take up an entire city block or they would not be in the “angle” you need them to be.

1. A gas station and a restaurant (*congruent* alternate exterior angles)
2. Your house and a school (*supplementary* same side interior angle)
3. A courthouse and a bank (vertical angles)
4. A general store and a place of worship (*congruent* corresponding angles)
5. A library and a park (*congruent* alternate interior angles)
6. A post-office and the bank from #3 (linear pair)

Each building must be clearly labeled.

All names must be school appropriate.

Neatness and creativity is important!!

DO NOT make all your streets perpendicular to each other. You may have streets that make your city more interesting, but that don't have any buildings on them. You may have more buildings than the ones listed, but make sure you clearly label the ones you are graded on.

III. On a separate sheet of paper, complete the following problems. You must show your set up and all of your work to receive full credit.

****The answers to the following problems may not match HOW you designed your cultural city! That's ok. ☺**

1. If the courthouse is located at a corner with measure $5(3x-5)$ and the bank is located at a corner with measure $9x + 29$, determine the value of x , and the measure of the angles where the courthouse and bank are located.
2. If the general store is located at a corner with the measure $-4y + 20$ and the place of worship is located at a corner with measure $14y - 34$, determine the value of y , and the measure of the angles where the general store and the place of worship are located.
3. If your house is located at a corner with measure $3(5z - 4)$ and the school is located at a corner with a measure of $2(2z + 1)$, determine the value of z , and the measure of the angles where your house and the school are located.
4. If the gas station is located at a corner with the measure $8a + 10$ and the restaurant is located at a corner with measure $7(a + 2)$, determine the value of a , and the measure of the angles where your gas station and the restaurant are located.
5. If the library is located at a corner with the measure $12b + 18$ and the park is located at a corner with the measure $15b - 15$, determine the value of b , and the measure of the angles where the library and the park are located.

THIS SHEET MUST BE TURNED IN WITH YOUR PROJECT!!!!

Name _____ Period _____

Due Date: _____

Teacher Grading Rubric

Locations: (10 points each)

- _____ A gas station and a restaurant (alternate exterior angles)
- _____ Your house and a school (same side interior angle)
- _____ A courthouse and a bank (vertical angles)
- _____ A general store and a church (corresponding angles)
- _____ A library and a park (alternate interior angles)
- _____ A post-office and the bank from #3 (linear pair)

Total for Locations: _____

Other:

- _____ City Name and Population (2 points)
- _____ At least 5 parallel streets (4 points)
- _____ At least 2 transversals (2 points)
- _____ Neatness (4 points)
- _____ Creativity (4 points)
- _____ Visually appealing (4 points)
- _____ Correct set up for equations (10 points)
- _____ Correct solutions for equations (10 points)

Total for Other: _____

Total for Project _____