Name _____ Date _____

An Author's Point, Reasons and Evidence: Why Cities Plant Trees

Directions: Read the passage. Go back to the text to check each answer. For the matching question, pair each reason with the evidence the author gives.

Why Cities Plant Trees

Cities pay to plant, water and trim street trees. Why do they keep planting more? Trees help cities in several ways.

First, trees help cool the city. Their leaves shade the ground and buildings. The Environmental Protection Agency, or EPA, reports on tree shade at two houses in Sacramento, California, in summer 1992. The biggest drops on the wall and roof surfaces studied were about 20 to 45 degrees Fahrenheit.

Second, trees catch rain. Leaves and branches hold some of the water. Less of it rushes into storm drains. A 2007 Forest Service study used a count of New York City's street trees from 2005 to 2006. It used rain records from 2000. The study estimated that those trees kept about 890 million gallons of rain from running off in a year.

Third, trees can help clean the air. Their leaves take in some harmful gases, and dust can stick to them. In a 2006 study, Forest Service scientists used weather and air data from 1994. They looked at trees and large shrubs in urban areas of the lower 48 states. They estimated these plants could remove about 711,000 metric tons of five kinds of pollution from the air in a year.

A 2005 study looked at street trees in five U.S. cities and park trees in four. It used cost reports from 2003 to 2005. Across the cities, estimated yearly benefits ranged from $1.37 to $3.09 per dollar spent. That included value trees may have added to home prices. To a city, a tree is a hard worker.

1. What is the main idea of "Why Cities Plant Trees"? Choose the point the author wants readers to accept.

A. Cities plant trees because trees can help a city in enough ways to be worth the cost.

B. Cities plant trees because trees can help clean the air and give birds places to live.

C. Cities plant trees because planting more trees costs less than finding other ways to solve city problems.

D. Cities plant trees because trees can cool sidewalks and give people shade on warm days.

2. Match each reason to the study result given in the passage. Each reason has two choices with different numbers. Three choices will be left over.

Write the letter of the matching answer on each line.

1. _____ Trees help cool the city.
2. _____ Trees catch rain.
3. _____ Trees can help clean the air.

Choices for question 2

A. Possible result: using 1994 weather and air data, a study estimated that trees and large shrubs in urban areas of the lower 48 states could remove about 711,000 metric tons of five kinds of air pollution in a year.

B. Possible result: in summer 1992, the biggest drops on the wall and roof surfaces studied at two houses in Sacramento, California, were about 10 to 30 degrees Fahrenheit.

C. Possible result: using rainfall records from 2000 and a 2005 to 2006 street tree count, a study estimated that New York City's street trees kept about 970 million gallons of rain from running off in a year.

D. Possible result: in summer 1992, the biggest drops on the wall and roof surfaces studied at two houses in Sacramento, California, were about 20 to 45 degrees Fahrenheit.

E. Possible result: using rainfall records from 2000 and a 2005 to 2006 street tree count, a study estimated that New York City's street trees kept about 890 million gallons of rain from running off in a year.

F. Possible result: using 1994 weather and air data, a study estimated that trees and large shrubs in urban areas of the lower 48 states could remove about 820,000 metric tons of five kinds of air pollution in a year.

3. Why does the author give the dollar amounts from the five-city study?

A. to show that the city that spent the most got the most back for each dollar

B. to show that the study estimated the trees' yearly benefits were worth more than the cities spent on them

C. to show that the five cities got about the same yearly benefit for each dollar they spent

D. to show that the cities spent less on trees at the end of the study than at the start

4. Which reason does the author support with the study reported by the EPA in the passage?

A. Trees can help clean the air.

B. Trees help cool the city.

C. Trees catch rain.

D. Trees make streets look pretty.

5. Which studies does the author use to support the points about rain and air pollution?

A. two Forest Service studies

B. two studies by New York City's parks department

C. two Environmental Protection Agency studies

D. two university studies

6. Which detail does the author give to explain how trees can make city air cleaner?

A. Rows of trees can slow winds that carry dust.

B. Dust can stick to the leaves.

C. Trees can shade homes so power plants make less pollution.

D. Bark can catch tiny bits of pollution.

7. The author says trees keep some rain from rushing into city drains. Which detail from the passage explains how?

A. Low spots around a tree collect some rain.

B. Rain soaks into the ground around a tree.

C. Roots take up water from the soil.

D. Leaves and branches hold some of the water.