

# Surviving and Thriving Trees

Trees flourish and thrive in extreme temperatures and conditions. Learn a little more about these tree survivalists by solving these math word problems involving integers.

1. Bur oaks that grow in North America live in areas with temperatures that range from  $-20^{\circ}\text{F}$  to  $20^{\circ}\text{F}$ . What is the difference between these temperatures?
2. City trees face hotter temperatures than trees in nearby wooded areas because the large amounts of asphalt and concrete absorb and reflect heat. City temperatures are  $9^{\circ}\text{F}$  to  $12^{\circ}\text{F}$  hotter than surrounding wooded areas. If the temperature in a wooded area is  $-2^{\circ}\text{F}$ , in what range would the temperature in a nearby city be?
3. The hardy shagbark hickory withstands extreme temperatures that may go from  $-40^{\circ}\text{F}$  to a high of  $115^{\circ}\text{F}$ . What is the difference between these two temperatures?
4. The whitebark pine can live in temperatures as low as  $-9^{\circ}\text{C}$ , while the Rocky Mountain bristlecone pine can only handle temperatures as low as  $1.5^{\circ}\text{C}$ . What is the difference between these two temperatures?
5. Death Valley National Park, one of the hottest and driest places in North America, is home to trees that have adapted to the heat, such as the honey mesquite, pinyon pine, and juniper. The highest recorded temperature in Death Valley was  $57^{\circ}\text{C}$ , while the coldest was  $-10^{\circ}\text{C}$ . What is the difference between these two temperatures?
6. Another tree survivor is the cottonwood. In Kansas, cottonwood trees have lived through a low of  $-40^{\circ}\text{F}$  and a high of  $121^{\circ}\text{F}$ . What is the difference between these two temperatures?



© Can Stock Photo Inc. / mikenorton

**Cottonwood trees can survive extreme temperatures and make good shade trees.**

Trees, which are the primary raw material for making paper, are a renewable resource. Forest management standards require, among other things, that several trees be replanted or naturally regenerated for every tree harvested.



## Bonus Box:

Not even the hardest tree can survive in Badwater Basin in Death Valley National Park. It is the lowest point in North America at 282 feet below sea level. The highest point in this park is Telescope Peak, which is 11,049 feet above sea level. What is the difference in elevation between these two places?

6.NS.C.5, 6

# “Surviving and Thriving Trees”

## Answer Key

1. 40 degrees
2. 7 to 10 degrees
3. 155 degrees
4. 10.5 degrees
5. 67 degrees
6. 161 degrees

Bonus box: 11,331 feet

