

**Use your knowledge of integers to solve each problem.**

1. The melting point of sodium is 98 degrees Celsius ( $^{\circ}\text{C}$ ) and the melting point of zinc is  $420^{\circ}\text{C}$ . How much hotter is the melting point of zinc than that of sodium?  $420^{\circ}\text{C} - 98^{\circ}\text{C} = 330^{\circ}\text{C}$
  
2. The average temperature of Venus is  $480^{\circ}\text{C}$ . The average temperature on Pluto is  $-230^{\circ}\text{C}$ . How much warmer is Venus than Pluto?  $480^{\circ}\text{C} - -230^{\circ}\text{C} = 480^{\circ}\text{C} + +230^{\circ}\text{C} = 710^{\circ}\text{C}$
  
3. Aluminum melts at  $659^{\circ}\text{C}$  and copper melts at  $1083^{\circ}\text{C}$ . What is the difference between the melting points of aluminum and copper?  $659^{\circ}\text{C} - 1083^{\circ}\text{C} = -424^{\circ}\text{C}$
  
4. The boiling point of water is 212 degrees Fahrenheit ( $^{\circ}\text{F}$ ). Propane boils at about  $-44^{\circ}\text{F}$ . How much hotter is the boiling point of water than that of propane?  $212^{\circ}\text{F} - -44^{\circ}\text{F} = 212^{\circ}\text{F} + +44^{\circ}\text{F} = 256^{\circ}\text{F}$
  
5. Unleaded gas freezes around  $-150^{\circ}\text{F}$ . Water freezes at  $32^{\circ}\text{F}$ . What is the difference between the two freezing points?  $32^{\circ}\text{F} - -150^{\circ}\text{F} = 32^{\circ}\text{F} + +150^{\circ}\text{F} = 182^{\circ}\text{F}$
  
6. The temperature on Mercury varies from  $400^{\circ}\text{C}$  on the day side to  $-180^{\circ}\text{C}$  on the dark side. What is the difference in temperature?  $400^{\circ}\text{C} - -180^{\circ}\text{C} = 400^{\circ}\text{C} + +180^{\circ}\text{C} = 580^{\circ}\text{C}$
  
7. The freezing point of oxygen is  $-218.79^{\circ}\text{C}$  and hydrogen is  $-252.8^{\circ}\text{C}$ . A lab is lowering the temperature inside a fridge. Which freezes first? How much colder does it have to be for both to freeze?  
**Oxygen freezes first since  $-218.79^{\circ}\text{C} > -252.8^{\circ}\text{C}$**   
 $-218.79^{\circ}\text{C} - -252.8^{\circ}\text{C} = -218.79^{\circ}\text{C} + +252.8^{\circ}\text{C} = 34.01^{\circ}\text{C}$
  
8. The temperature in Montreal, Quebec at 3 pm is  $1^{\circ}\text{C}$ . The temperature drops to  $-9^{\circ}\text{C}$  at 3 am. How many degrees did the temperature drop?  $1^{\circ}\text{C} - -9^{\circ}\text{C} = 1^{\circ}\text{C} + +9^{\circ}\text{C} = 10^{\circ}\text{C}$
  
9. The moon experiences many extremes in temperature because it has no atmosphere. For example, on the side of the moon that the sun is shining on, the temperature can reach  $260^{\circ}\text{F}$ . On the dark side of the moon, it gets as cold as  $-280^{\circ}\text{F}$ . How much is the drop in temperature from day to night?  $260^{\circ}\text{F} - -280^{\circ}\text{F} = 260^{\circ}\text{F} + +280^{\circ}\text{F} = 540^{\circ}\text{F}$
  
10. Gold melts at  $1946^{\circ}\text{F}$ . Silver melts at  $1762^{\circ}\text{F}$ . How much cooler is the melting point of silver than gold?  $1762^{\circ}\text{F} - 1946^{\circ}\text{F} = -184^{\circ}\text{C}$