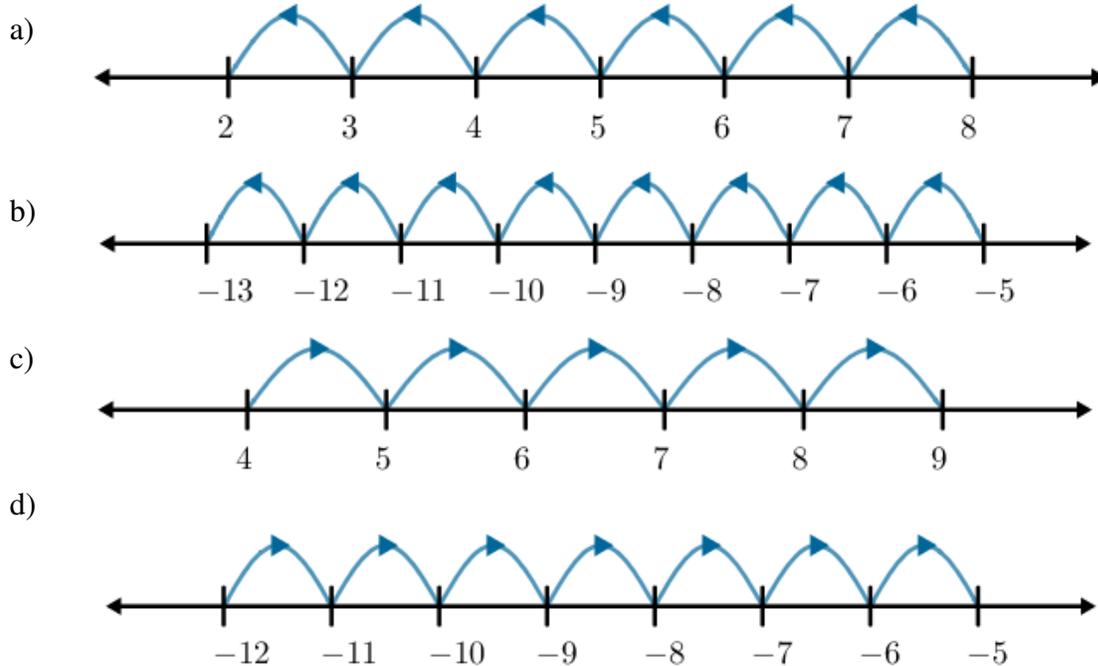


## SUBTRACTING INTEGERS

CHECK YOUR UNDERSTANDING

1) State the subtraction that is represented by each of the following number line diagrams



- 2) a) What number is 6 less than 13?      b) What number is 1 less than  $-9$ ?  
c) What number is 10 less than 4?      d) What number is 10 less than  $-30$ ?



3) Air temperature decreases as the height above the ground (altitude) increases. The temperature outside of a small airplane on the ground was  $-14^{\circ}\text{C}$ . After climbing 5000 feet to cruising altitude, the outside air temperature had decreased by  $10^{\circ}\text{C}$ . What was the outside air temperature at cruising altitude?

4) Subtract.

- a)  $12 - 8$       b)  $-4 - 6$       c)  $5 - (-2)$       d)  $-6 - (-7)$   
e)  $-8 - (-10)$       f)  $0 - 11$       g)  $0 - (-11)$       h)  $10 - 10$   
i)  $-10 - 10$       j)  $(-10) - (-10)$       k)  $50 - (-50)$       l)  $18 - 25$

- 5) a) Melanie claims that subtracting two positive integers always results in a positive integer. Is Melanie's claim correct? Explain.  
b) Jamar stated that subtracting two negative integers can result in a positive integer. Is Jamar correct? Explain.  
c) Aponi claims that subtracting a negative integer from a positive integer always gives a positive result. Is Aponi's claim correct? Explain.

## ANSWERS

- 1) a)  $8-6$       b)  $-5-8$       c)  $4-(-5)$       d)  $-12-(-7)$
- 2) a) 7      b) -10      c) -6      d) -40
- 3)  $-24^{\circ}\text{C}$
- 4) a) 4      b) -10      c) 7      d) 1      e) 2      f) -11  
g) 11      h) 0      i) -20      j) 0      k) 100      l) -7
- 5) a) No. A positive number minus a greater positive number will give a negative result.  
b) Yes. Subtracting a negative number that is farther from zero than the starting number will give a positive result.  
c) Yes. In this case, one would start at a positive number and move to the right on the number line, giving a greater positive result.