

## Subtracting Integers - HOMEWORK

1. How are  $5 - 8$  and  $5 + (-8)$  similar?
2. Write a subtraction problem involving one positive and one negative integer that has a negative result.
3. Write a subtraction problem involving one positive and one negative integer that has a positive result.
4. Explain why subtracting a negative number is equivalent to adding.

5. Imagine that you received a report of transactions, but one digit in each number was smudged (♣) and unreadable. For each of the following, determine whether the result will be positive, zero, negative, or impossible to determine.

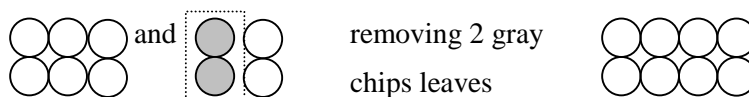
a.  $-57♣7 - 43♣$

b.  $6♣9 - (-3♣7)$

c.  $♣18 - (-♣30)$

d.  $-1♣32 - (-79♣)$

6. Write the subtraction of integers problem that is represented by these chips.



7. Draw the chips which represent the problem, and solution, to  $5 - (-4)$ .

8. Use the return of the sweater scenario to explain the problem  $-25 - (-50)$ .

9. The subtraction problem  $5 - 8$  and the addition problem  $5 + (-8)$  both give the result  $-3$ . What different meaning does each problem represent?

**In problems 10 – 19, perform the indicated operation, without a calculator.**

**10.**  $-5 - 8 =$

**11.**  $-5 - (-7) =$

**12.**  $10 - (-12) =$

**13.**  $-28 - 12 =$

**14.**  $32 - (-18) =$

**15.**  $-18 - 42 =$

**16.**  $-227 - 15 =$

**17.**  $-106 - (-10) =$

**18.**  $-15 - (-5) + 7 =$

**19.**  $-18 + 42 - (-3) - 6 =$

**20.** Use subtraction to model each of the following.

**a.** The high temperature in Phoenix one summer day was  $108^{\circ}\text{F}$ . The low temperature that same day was  $85^{\circ}\text{F}$ . What was the difference between the high and the low temperatures that day?

**b.** The high temperature in Fairbanks one winter day was  $-25^{\circ}\text{F}$ . The low temperature that same day was  $-33^{\circ}\text{F}$ . What was the difference between the high and the low temperatures that day?

**21.** On Monday morning you purchased stock. By the close of the day, the price rose \$2. On Tuesday it rose \$6. Wednesday, it fell \$11. Thursday it fell another \$17 and on Friday it rose \$7. Represent the situation with addition and subtraction of integers. Determine the net change in the price of the stock for the week.

**22.** One year Russell hiked to the top of Mt. Whitney (elev. 4417 m) in California. Later that year he visited the Badwater, CA (elev  $-86$  m) in Death Valley. What was the total difference in elevation that Russell experienced that year?

**23.** Clarissa was on a weight-loss program one year. She weighed 165 lb to start. The first month Clarissa lost 6 lb. The second month she lost 7 lb. The third month she went on vacation and gained 1 lb. Represent the situation with addition and subtraction of integers. How much did Clarissa weigh at the end of the third month?