



## Concept: Subtracting Integers

Name: \_\_\_\_\_


### COMPUTER COMPONENT

**Instructions:** In  follow the **Content Menu** path:

**Whole Numbers and Integers > Subtracting Integers**

 Work through all Sub Lessons of the following Lessons **in order**:

- *In This Topic*
- *Markers ...An Introduction to subtraction*
- *Elevators ...An Introduction to subtraction*
- *Summary ... Add the Opposite*
- *Example Questions*
- *Going for a Walk*
- *Word Problems*

 As you work through the computer exercises, you will be prompted to make notes in your notebook/math journal.

### SUMMARY

Note: ● = (+1)   ○ = (-1)

1. Complete the chart below as you work through the computer portion of this section.

Example	Number Sentence	Marker Representation	Answer
1	$(+5) - (+3) =$		
2			
3			
4			
5			
6			
7			

8			
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**The Pattern:**

### OFF COMPUTER EXERCISES

1. Fill in the blanks.

(a) When you add red and blue markers in order to get an answer of zero, you are using the \_\_\_\_\_ property.

(b) When subtracting integers, add the \_\_\_\_\_.

2. Demonstrate your knowledge of subtracting integers by completing the chart below.

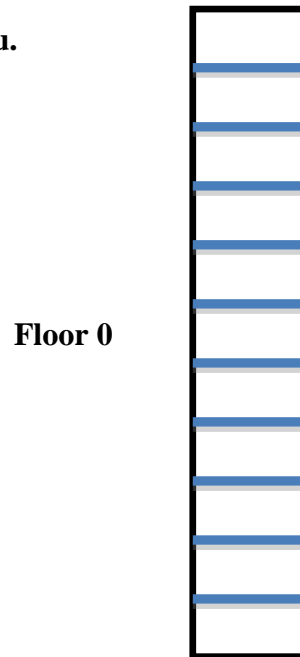
*Note:* ● = (+1)      ○ = (-1)

	Number Sentence	Marker Representation	Result
(a)	$(+2) - (-1) =$	● ● - ○ =	+3
(b)	$(+5) - (-1) =$		
(c)		● ● ● ● - ○ ○ =	
(d)	$(-6) - (+2) =$		
(e)	$(-2) - (-3)$		
(f)	$-4 - (+5)$		

3. Demonstrate your knowledge of subtracting integers by completing the ‘Elevator Travel’ table below. *The first one is done for you.*

Elevator Starts At:	Elevator Ends At:	Final – Initial Position:	Change In Height:
1	3	$(+3) - (+1) =$	+2
4	1		
2	P1		
P2	3		
Ground Level	2		

Use this ‘Elevator’ Integer line to help you.



4. When we subtract integers, we add the opposite.

For the following:

- Fill in the missing integers.
- Finish answering the question.

$$\begin{aligned}
 \text{(a) } +6 - 9 + 2 &= (+6) - ( \quad ) + ( \quad ) \\
 &= (+6) + ( \quad ) + ( \quad ) \\
 &= \underline{\hspace{2cm}}
 \end{aligned}$$

$$\begin{aligned}
 \text{(b) } -8 - 3 + 2 &= (-8) - ( \quad ) + ( \quad ) \\
 &= (-8) + ( \quad ) + ( \quad ) \\
 &= \underline{\hspace{2cm}}
 \end{aligned}$$

5. Find the answer to these subtraction questions. You may use a number line to help you.

$$(a) (-3) - (-1) =$$

$$=$$

$$(b) (-4) - (+1) =$$

$$=$$

$$(c) (-4) - (+3) =$$

$$=$$

$$(d) (-2) - (+4) =$$

$$=$$

$$(e) (-1) - (+1) =$$

$$=$$

$$(f) (+5) - (-2) =$$

$$=$$

$$(g) (+3) - (-1) =$$

$$=$$

$$(h) (-3) - (-2) =$$

$$=$$

6. During a severe thunderstorm, the tree in your front yard lost the top 2m of its trunk.

If the tree trunk was originally 15m tall, how tall is the trunk now? *Use integers to answer this question.*

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7. Find the answer for each question. Remember to add the opposite.

$$(a) (-1) - (+7) =$$

$$=$$

$$(b) 0 - (-10) =$$

$$=$$

$$(c) (+3) - (-2) =$$

$$=$$

$$(d) (+5) - (+3) =$$

$$=$$

$$(e) (+2) - (-9) - (+18) =$$

$$=$$

$$(f) (+5) - (+6) - (+3) =$$

$$=$$

$$(g) (-7) - (-7) - (-3) =$$

$$=$$

$$(h) (+8) - (-9) - (+4) =$$

$$=$$

$$(i) (-5) - (-3) - (+2) - (+10) =$$

$$=$$

$$(j) (-6) - (-2) - (-8) - (+2) =$$

$$=$$

8. Sometimes expressions are written without brackets. For these types of expressions, we can do the following:

$$4 - 8 + 5 = (+4) - (+8) + (+5)$$

$$= (+4) + (-8) + (+5)$$

$$= +1 \quad \rightarrow \text{ which can also be written as } 1$$

*You try.*

$$(a) 5 - 9 + 4 =$$

$$=$$

$$=$$

$$(b) -1 + 3 - 5 + 7 =$$

$$=$$

$$=$$

$$(c) -5 + 10 - 8 + 15 - 4 =$$

$$=$$

$$=$$

$$(d) 14 - 6 + 2 - 1 + 6 - 10 =$$

$$=$$

$$=$$