Adding Integers #1

Name:
Date: Period:

Adding Two Integers with the Same Sign
(both positive or both negative)

When adding two ***positive integers***, simply determine the total. The sum will positive.
Consider the "counter model" for the sum of 2 + 3:

```
+ +   + + +    =    + + + + +
  2   +   3    =    5
```

When adding two ***negative integers***, the sum will be a negative integer.
Consider the counter model for the sum of -2 + (-3):

```
  - -   - - -    =    - - - - -
-2    +   (-3)   =    -5
```

Adding Two Integers with Different Signs
(one integer is positive the other is negative)

The result of adding integers with different signs is based on the **difference** of the integers' **absolute values**. And, whether the result is positive or negative, depend upon which integer has the greater absolute value (distance from zero). Again this can be demonstrated using the counter models.

The absolute value of -5 is greater than the absolute value of 2. The counter model of the sum of -5 and 2 show this, and also show that there is a difference in the number of counters. The sum will be negative. Notice the "zero pairs" in the model.

```
   -5  +  2     =     -3

- - - - -
          =     - - -
    + +
```

The absolute value of 5 is greater than the absolute value of -2. The sum will be positive.

```
   5  +  (-2)   =     3

+ + + + +
          =     + + +
    - -
```

Use the counter model, as shown in the examples, to determine the sum of the following items.

1. $4 + 3 =$

2. $5 + 4 =$

3. $-3 + (-3) =$

4. $-6 + (-2) =$

5. $6 + (-2) =$

6. $5 + (-3) =$

7. $-3 + 7 =$

8. $-5 + 6 =$

9. $-6 + 4 =$

10. $-10 + 7 =$

11. $2(2 + 3) =$

12. $3(1 + 2) =$

13. $3\Big(3 + (-1)\Big) =$

14. $2\Big(2 + (-4)\Big) =$

Adding Integers #2

Name:

Date: Period:

For items 1 through 5, simply state if the sum will be positive or negative. Then, explain why the result will be positive or negative. An example is given.

	Expression	Positive or Negative?	Why?
	8 + 2	Positive	Adding two positive integers results in a positive integer.
1.	-49 + (-88)		
2.	77 + 345		
3.	-22 + 50		
4.	6 + (-37)		
5.	-6 + 37		

Determine the following sums:

1. $12 + 25 =$
2. $-5 + 12 =$
3. $10 + (-7) =$
4. $-22 + 33 =$
5. $-8 + (-31) =$
6. $-24 + (-23) =$
7. $-35 + 25 =$
8. $24 + (-35) =$
9. $102 + (-25) =$
10. $47 + (-75) =$
11. $5 + (-7) + (-2) =$
12. $22 + (-25) + 2 =$