



# Worksheet: Addition of Integers

Using a  tile as +1, a  tile as -1, and ~~using zero pairs~~ *AND USING "ZERO PAIRS"*, complete the following chart.

Symbolic Form	Pictorial Form	Result in Number and Colour of Tiles	Result in symbols
$(+4) + (+1)$		5 red	+5
$(-2) + (-3)$			
$(+5) + (-3)$		2 red	+2
$(-2) + (+4)$			
$(-3) + (+3)$			
$(-4) + (+1)$			
$(+5) - (-4)$			
$(+3) + (+4)$			
$(+2) - (-2)$			
		neither red nor blue	

Answer the questions by studying the results from the table above.

- What patterns are in the questions where you are adding two positive integers or two negative integers?

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## Worksheet: Addition of Integers (continued)

2. What patterns are in the questions where you are adding a positive integer and a negative integer?

3. a) What type of question leads to the answer zero?

b) What do you have to add to 3 to generate a result of 0?

c) What do you have to add to  $-7$  to generate a result of 0?

d) Fill in the blanks. In each of b) and c) we call the number needed the “opposite” of the number given. i.e., Opposites add to give zero. The opposite of 6 is  $-6$ , of 7 is  $-7$ , of 20 is \_\_\_\_\_, and the opposite of 99 is \_\_\_\_\_. In each case you are, symbolically, putting a  $-$  sign in front of a number to form its opposite. To be consistent, we should form the opposite of  $-5$  by placing a  $-$  sign in front of it. We get  $-(-5)$ . But we know that the opposite of  $-5$  is \_\_\_\_\_ since 5 adds to  $-5$  to give 0. Therefore  $-(-5) = 5$ . We read “the opposite of negative 5 is five.”

e) What are the two different ways in which we read a  $-$  sign in part d?