Operations on Integers

Answer Key

1) Answer: A
Explanation: - 932 and - 110 are integers with the same signs (both are negative). Hence, we apply the rules on adding integers with the same signs.

Step 1: *Add the absolute values of the given integers.*
The absolute value of - 932 is 932 while the absolute value of - 110 is 110. Adding their absolute values: 932 + 110 = 1042

Step 2: *Put the common sign to the number you have obtained from Step 1.*
The common sign is negative. Thus, the number we have obtained from Step 1 should be negative.

Therefore, - 932 + - 110 = - 1042.

2) Answer: B
Explanation: It was stated that both *m* and *n* are integers. If $m < 0$, this means that *m* is a negative integer. On the other hand, if $n > 0$, then it means that *n* is a positive integer. Therefore, when we multiply *m* by *n* or *m x n,* the result will be negative since *m* and *n* have different signs.

3) Answer: A
Explanation: Let us use the steps on subtracting integers.

Step 1: *Change the operation into addition and reverse the sign of the second integer (or the subtrahend)*
We start by changing the operation from subtraction into addition and reversing the sign of the second integer. The second integer is - 12 and its reverse is 12. Thus, we have:

89 + 12

Step 2: *Apply the rules on adding integers.*
We have obtained 89 + 12 from Step 1. Now, let us add integers with the same signs:

89 + 12 = 101

Therefore, 89 - (- 12) = 101

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4) Answer: C
Explanation: Mathematical equations in options A and B violate the rules on adding and subtracting integers. Meanwhile, the mathematical equation in C which is $-327 \div 3 = -109$ is true since when we divide integers with different signs, the result or quotient must be negative.

5) Answer: D
Explanation: Options A and B are not true since if both integers are positive or negative, the result must be positive. Meanwhile, Option C is not also true since the product of any integer and zero is always zero.