**GUÍA DE MATEMÁTICA**

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| NOMBRE: |  | | |
| CURSO: | 8° Básico | FECHA: | **Semana 16** |
| **OBJETIVO**: **OA 1.** Mostrar que comprenden la multiplicación y la división de números enteros:  •representándolas de manera concreta, pictórica y simbólica  •aplicando procedimientos usados en la multiplicación y la división de números naturales  •aplicando la regla de los signos de la operación  • resolviendo problemas rutinarios y no rutinarios | | | |
| **Contenido:** Multiplicación y división de números enteros. | | | |
| **Objetivo de la semana:** Demostrar comprensión de la multiplicación y división de números enteros. Representando situaciones de forma simbólica siguiendo estrategias dadas en guía de trabajo. | | | |
| **Habilidad**: Representar. | | | |

**Instrucciones**

Estimados alumnos y alumnas: En la siguiente guía de trabajo, deberán desarrollar las actividades planeadas para la clase que ha sido suspendida por prevención. Las instrucciones están dadas en cada ítem.

**¡Éxito!**

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| **Representar** es expresar simbólicamente una situación.  **Números enteros** es el conjunto de números conformado por enteros positivos y negativos.  **Números Enteros.**  Los números enteros (**Z**) corresponden a los números naturales (enteros positivos), los enteros negativos y el cero. Este tipo de números los encontramos en diversas situaciones de la vida cotidiana. Como para medir altura y profundidad, temperaturas muy altas y muy bajas, líneas de tiempo antes y después de Cristo,etc.  **Multiplicación y División de Números Enteros**   |  |  |  |  |  | | --- | --- | --- | --- | --- | | + | : | + | = | + | | – | : | – | = | + | | + | : | – | = | – | | – | : | + | = | – |   Para multiplicar y dividir números enteros, podemos utilizar las mismas estrategias que se utilizan para mutiplicar y dividir números naturales. La única diferencia es que al momento de escribir el signo del resultado debemos respetar la siguientes reglas:   |  |  |  |  |  | | --- | --- | --- | --- | --- | | + | · | + | = | + | | – | · | – | = | + | | + | · | – | = | – | | – | · | + | = | – |     Si te fijas, cuando los signos de los factores son iguales, el producto (resultado) es positivo. Por otro lado, cuando los signos de los factores son distintos, el producto es negativo.  *Esta regla se aplica tanto en la multiplicación como en la división de números enteros.*  **Ejemplo con multiplicación de números enteros:**  *Si el número no tiene signo, asumimos que es positivo.*  26 · (-32) =  **Paso 1:** Desarrollamos la multiplicación como si no tuviese signos.   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | |  |  | 1 |  |  |  |  | |  |  | 1 |  |  |  |  | |  |  | **2** | **6** | **·** | **3** | **2** | |  | 1 | 5 | 2 |  |  |  | | + | 7 | 8 | 0 |  |  |  | |  | 8 | 3 | 2 |  |  |  |     **El producto de la multiplicación es 832**    **Paso 2:** Asignamos un signo al resultado de acuerdo a la regla que está más arriba. En este caso, el primer factor es positivo y el segundo es negativo. Por lo tanto el producto es negativo.  **+ ·** – **=** –  Entonces:  26 · (-32) = **(-832)** | |
| **Resuelve las siguientes multiplicaciones de números enteros guiándote por los pasos anteriores:** | | | |
| Ejemplo  (-246) · (-25) = +6.150   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  | 1 |  |  |  |  | |  |  | 2 | 3 |  |  |  |  | |  | 1 | **2** | **4** | **6** | **·** | **2** | **5** | |  | 1. | 2 | 3 | 0 |  |  |  | | + | 4. | 9 | 2 | 0 |  |  |  | |  | **6.** | **1** | **5** | **0** |  |  |  |   **– · – = +** | | 18 · 27 =   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | | |
| (-642) · 15 =   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | | | 33 · (-93) =   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | | |
| (-29) · (-54) =   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | | | 581 · (-16) =   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | | |
| **Ejemplo con división de números enteros:**  (-50) : (-4) =  **Paso 1:** Desarrollamos la división como si no tuviese signos.   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | 5 | 0 | : | 4 | = | **1** | **2 ,** | **5** | | 1 | 0 |  |  |  |  |  |  | |  | 2 | 0 |  |  |  |  |  | |  |  | 0// |  |  |  |  |  |     **El cociente de la división es 12,5**    **Paso 2:** Asignamos un signo al resultado de acuerdo a la regla que está más arriba. En este caso, tanto el dividendo como el divisor son negativos. Por lo tanto el cociente es positivo.  – **:** – **=** +  Entonces:  (-50) : (-4) = +**12,5** | | | |
| **Resuelve las siguientes divisiones de números enteros guiándote por los pasos anteriores:** | | | |
| Ejemplo   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | 4 | 5 | : | 3 | = | **1** | **5** | | 1 | 5 |  |  |  |  |  | |  | 0// |  |  |  |  |  |   45 : (-3) = -15    **– : + = –** | | (-76) : (-4) =   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | | |
| 87 : (-3) =   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | | | (-51) : 6 =   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | | |
| 87 : 5 =   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | | | (-91) : (-7) =   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | | |
| **Responde las asiguientes preguntas relacionadas con lo realizado en la guía:** | | | |
| ¿Qué es un número entero?  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  ¿Cómo se deben multiplicar? **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  ¿Cómo se deben dividir?  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | | | |
| **TICKET DE SALIDA** | | | |
| **Resuelve las siguientes multiplicaciones de números enteros**   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | (-38) · (-63) = | | | | | | | | | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 564 · (-8) = | | | | | | | | | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | (-96) : 8 = | | | | | | | | | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |   **Resuelve las siguientes divisiones de números enteros.**   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | (-84) : (-6) = | | | | | | | | | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  | | | | |