Grade 8 Math Unit 2: INTEGERS **REVIEW** for TEST #2 Name\_\_\_\_\_\_\_\_\_\_\_\_\_

1. When **multiplying only** OR **dividing only** Class:\_\_\_\_\_\_\_\_\_\_\_\_
* **SAME signs** give a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ answer

|  |  |
| --- | --- |
|  $\left(+7\right)(+8)=\\_\\_\\_\\_\\_$  |  $\left(-6\right)\left(-5\right)=\\_\\_\\_\\_\\_\\_\\_$ |
| $$\frac{(+45)}{(+5)}=\\_\\_\\_\\_\\_\\_$$ | $$\frac{-28}{-7}=\\_\\_\\_\\_\\_$$ |

1. When **multiplying only** OR **dividing only**

**DIFFERENT signs** give a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ answer.

|  |  |
| --- | --- |
|  $\left(-3\right)(+8)=\\_\\_\\_\\_\\_$  |  $\left(-7\right)\left(5\right)=\\_\\_\\_\\_\\_\\_\\_$ |
| $$\frac{(-35)}{(+5)}=\\_\\_\\_\\_\\_\\_$$ | $$\frac{-35}{+7}=\\_\\_\\_\\_\\_$$ |

1. A) An **EVEN number of Negative Integers** **multiplied togethe**r give a \_\_\_\_\_\_\_\_\_\_\_\_\_\_ answer.
2. An **ODD number of Negative Integers** **multiplied together** give a \_\_\_\_\_\_\_\_\_\_\_\_\_\_ answer.

1. **Addition statement written as a multiplication statement:**

(-4)+(-4)+(-4)+(-4)+(-4) =\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **Properties of Integers**

|  |  |
| --- | --- |
| Example | **Property** |
| (-9) x 0 = 0 |  |
| $$\left(-6\right)\left(+7\right)=\left(+7\right)(-6)$$ |  |
| (-16) x 1 = (-16) |  |
| (-2)[(+3) +(-4)] = (+2)(+3) + (+2)(-4)  |  |

1. Evaluate:

|  |  |  |  |
| --- | --- | --- | --- |
| A) (-6)2= \_\_\_\_\_\_\_\_\_  | B) (-5)(-9) = \_\_\_\_\_ | C) (+4)(-8) = \_\_\_\_\_ | D) (+4)(-7) = \_\_\_\_ |
| E) (+9)(+8)= \_\_\_\_\_\_ | F) $\frac{-54}{-9}=\\_\\_\\_\\_\\_\\_\\_\\_$ | G) $\frac{+110}{+10}=\\_\\_\\_\\_\\_\\_\\_$ | H) $\frac{0}{-4}=\\_\\_\\_\\_\\_\\_\\_$ |
| I) $\frac{+36}{-6}=\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_$  | J) $\frac{-24}{+8}=\\_\\_\\_\\_\\_\\_\\_$ | K) $5\left(+4\right)\left(-3\right)=\\_\\_\\_\\_$ | L) $\left(-3\right)\left(-6\right)\left(-8\right)=\\_\\_\\_\\_\\_$ |
| M) $\left(-64\right)÷\left(+8\right)÷\left(-2\right)=\\_\\_\\_\\_\\_\\_\\_$ | N) $\frac{-8}{0}$ = \_\_\_\_\_\_\_ |  |  |

1. The product of two integers is 12. The sum of the same integers is $-7. $ What are the integers?
2. The temperature gets colder by an average of 10oC every two hours. What is the change in temperature which occurs after 12 hours is:
3. Model using either TILES or NUMBER LINE each of the following: Explain your answer.

A) (+4)(-7) C) (-3)(+4)

B) (+3)(+6) D) (-2)(-3)

1. Identify the multiplication of integers shown below.

A) face

** -8 -7 -6 -5 -4 -3 -2 -1 0 +1 +2 +3 +4 +5 +6 +7 +8**

B) face

** -8 -7 -6 -5 -4 -3 -2 -1 0 +1 +2 +3 +4 +5 +6 +7 +8**

C) face

** -8 -7 -6 -5 -4 -3 -2 -1 0 +1 +2 +3 +4 +5 +6 +7 +8**

D) face

** -8 -7 -6 -5 -4 -3 -2 -1 0 +1 +2 +3 +4 +5 +6 +7 +8**

1. Identify the division of integers shown by each number line.

A) face

** -8 -7 -6 -5 -4 -3 -2 -1 0 +1 +2 +3 +4 +5 +6 +7 +8**

B) face

** -8 -7 -6 -5 -4 -3 -2 -1 0 +1 +2 +3 +4 +5 +6 +7 +8**

C) face

** -8 -7 -6 -5 -4 -3 -2 -1 0 +1 +2 +3 +4 +5 +6 +7 +8**

D) face

** -8 -7 -6 -5 -4 -3 -2 -1 0 +1 +2 +3 +4 +5 +6 +7 +8**

1. According to BEDMAS, identify the operation which must be performed first. [4 marks]

|  |  |
| --- | --- |
| Integer Expression | Operation to perform first**DO NOT EVALUATE!!!** |
| A) $\left(-2\right)- \left(+12\right)÷ (-3)$ |  |
| B) $\frac{(-45)}{\left(+3\right)- (-6)}$ |  |
| C) $12+[\left(-5\right)-\left(-6\right)]$ |  |
| D) $\left(-18\right)+ (-2)^{2}-(+7)$ |  |
| E) $\left(-48\right)÷\left(+3\right)÷(-4)$ |  |

1. Evaluate each expression.

A) +9 + (+3) x (-4) C. 24 ÷ (-4) + (-3) x (-4)

B) $ \frac{\left(-3\right)+ (-15)}{\left(-8\right)-(+1)}$ D. (-10)2 ÷ [ (+8) - (-2) ]

1. Blaine drove from Deer Lake to St. John’s at an average speed of 100 km/h. After 4.5 hours of driving Blaine was still 200 km away from St. John’s. Determine how far apart Deer Lake and St. John’s are from one another.
2. A stock market decreased in price by $77 over seven days. What is the daily decrease in price?
3. What is the multiplication statement shown?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What is the division statement shown?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What would happen if these blocks were ALL clear?­­­­­­­­­­­­­­­­­­­­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

MULTIPLICATION STATEMENT\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

DIVISION STATEMENT\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. A) How would you model (-2) x (+5)?

B) How would you model (-8) $÷$ +2)?

Unit 2 : INTEGERS MIDTERM REVIEW ANSWER SHEET

1. Positive A) +56 B) +9 C) +30 D) +4
2. Negative A) -24 B) -7 C) -35 D) -5
3. A) +ve B) –ve
4. (+5)(-4)
5. A) Zero Property B) Commutative Property C) Multiplicative Identity D) Distributive Property
6. A) +36 B) +45 C) -32 D) -28 E) +72 F) +6 G0 +11 H) 0 I) -6 J) -3 K) -60 L) -144 M) +4

N) indefined

1. (-4) and )-3)
2. -60
3. A) -28 B) \_18 C) -12 D) +6
4. A) (-2)(-4)=(+8) B) (+2)(+4)=(+8) C) (-2)(+3)=(-6) D) (+2)(-3)=(-6)
5. A) $\left(+8\right)÷\left(-4\right)=\left(-2\right)$ B) $\left(+8\right)÷\left(+4\right)=\left(+2\right)$ C) $\left(-6\right)÷\left(+3\right)=\left(-2\right) $

$$D \left(-6\right)÷\left(-3\right)=\left(+2\right)$$

1. A) division B) subtraction C) brackets (subtraction) D) exponents E) division of left
2. A) -3 B) +2 C) +6 D) +10
3. 650 km
4. -11 drop of $11 /day
5. A) (+4)(+5) B) $\left(+20\right)÷\left(+5\right)=(+4)$ C) $\left(-20\right)÷\left(-5\right)=(+4)$
6. E)
7. A) Models remove two groups of size +5 B) model (dividend +8) dived by (forward 2) = backward facing 4