Concept: Dividing Integers

Name:

COMPUTER COMPONENT

Instructions: In UMATH X follow the **Content Menu** path:

Whole Numbers and Integers > Dividing Integers

Work through all Sub Lessons of the following Lessons **in order**:

- *Division to Multiplication*
- *The Division Table*
- *The Inverse of Multiplication*
- *Summary #1 ... Signs*
- *Summary #2 ... Signs*
- *Example Questions*
- *Word Problems*

As you work through the computer exercises, you will be prompted to make notes in your notebook/math journal.

OFF COMPUTER EXERCISES

1. First, write what you think the meaning is of the following mathematical terms. Then, proceed to use a use a dictionary to confirm your thinking. *How close were you?*

(a) **inverse** *(Division is the inverse of multiplication)*

Your definition- **Definitions will vary.**

Dictionary definition- **Opposite in order, nature or effect.**

Use this expression to demonstrate how division is the inverse of multiplication.

$$(-6) \times (+5) = (-30)$$

$(-30) \div (+5) = -6$ or $(-30) \div (-6) = (+5)$

(b) **quotient** *(The quotient of two integers ...)*

Your definition- **Definitions will vary.**

Dictionary definition- **The number resulting from the division of one number by another.**

2. Demonstrate your knowledge of dividing integers by completing the table below.

Type of Integer	Divided By	Type of Integer	Is Equal To	Sign of the Answer
positive	÷	positive	=	+
positive	÷	negative	=	-
negative	÷	positive	=	-
negative	÷	negative	=	+

Therefore,

The quotient of 2 integers with the same sign is **positive.**

The quotient of 2 integers with different signs is **negative.**

3. Find the quotient foe the following.

(a) (+63) ÷ (-7) = **-9**

(b) (+45) ÷ (-5) = **-9**

(c) (-36) ÷ (+6) = **-6**

(d) (-72) ÷ (-8) = **+9**

(e) (+48) ÷ (+12) = **+4**

(f) (-32) ÷ 4 = **-8**

(g) $\frac{(+50)}{(+5)}$ = **+10**

(h) $\frac{(-44)}{(-11)}$ = **-4**

(i) $\frac{(+4)}{(-1)}$ = **-4**

(j) $\frac{(+21)}{(-7)}$ = **-3**

(k) $\frac{(+90)}{(-2)}$ = **-45**

(l) $\frac{(-81)}{(-9)}$ = **-9**

4. Kim's dad is trying to lose weight by eating a well-balanced diet and following a regular exercise program. If Kim's dad loses 56 pounds in 28 weeks, how much weight is he losing per week?

(-56) ÷ (+28) = -2 Kim's dad is losing 2 pounds a week or -2.

5. Daniel got paid $60 for babysitting 12 hours. How much did he earn per hour?

(+60) ÷ (+12) = 5 Daniel earns $5 an hour.