

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Math 8 Honours Assignment 1.1 Multiplication Strategies:

1. Multiply each of the following without a calculator. Try to use the strategies used in class:

a) $13 \times 7$	b) $21 \times 8$	c) $18 \times 9$	d) $24 \times 7$	e) $91 \times 3$	f) $17 \times 15$
g) $33 \times 7$	h) $13 \times 11$	i) $17 \times 9$	j) $35 \times 8$	k) $45 \times 9$	l) $41 \times 8$
m) $23 \times 6$	n) $14 \times 16$	o) $45 \times 45$	p) $75 \times 75$	q) $95 \times 95$	r) $115 \times 115$
s) $55 \times 65$	t) $75 \times 65$	u) $85 \times 65$	v) $95 \times 35$	w) $45 \times 85$	x) $27 \times 33$
y) $19 \times 21$	z) $35 \times 45$	A) $81 \times 79$	B) $16 \times 24$	C) $23 \times 27$	D) $24 \times 16$
E) $59 \times 51$	F) $45 \times 55$	G) $11 \times 17$	H) $83 \times 77$	I) $64 \times 66$	J) $72 \times 68$
K) $99 \times 99$	L) $81 \times 81$	M) $93 \times 93$	N) $73 \times 73$	O) $44 \times 99$	P) $57 \times 999$
Q) $62 \times 38$	R) $43 \times 77$	S) $26 \times 26$	T) $123 \times 999$	U) $123 \times 9999$	V) $125 \times 35$

2. If  $a \times 23 \times b = 6210$  and  $a + b = N$ , what is the smallest possible value of  $N$ ?

3. What is the value of "K" such that the expression is true:

a.  $44 \times 25 = 100 \times K$

b.  $10 \times 20 \times 30 \times 40 \times 50 = 100 \times 2 \times 300 \times 4 \times K$

4. What is the value of each expression:

a.  $(2^3)^2 - 4^3$

b.  $1000^2 - 999^2$

c.  $501^2 - 499^2$

d.  $355^2 - 145^2$

5. If  $800760 = 8 \times 10^x + 7 \times 10^y + 6 \times 10^z$ , then what is the value of  $x + y + z$ ?
6. For each statement, describe a situation in which the statement is true.
- The product of two integers equals one of the integers.
  - The product of two integers equals the opposite of one of the integers.
  - The product of two integers is less than both integers.
  - The product of two integers is greater than both integers.
7. One day a sales person talked to 16 customers in 1 hour. How long would he need to work if he wanted to talk to 112 customers?
8. Gaston withdrew \$26 from his bank account each week for 17 weeks. Use integers to find the total amount Gaston withdrew over the 17 weeks. Show your work.
9. Since sunset 6 h ago, the temperature in Brandon, Manitoba, has decreased from  $+1^\circ\text{C}$  to  $-11^\circ\text{C}$ . Predict what the temperature will be 3 h from now. What assumptions did you make?
10. The only possible values of  $x$  are 3, 6, 9, and 12. The only possible values of  $y$  are -10, -8, -6, and -4. What is the largest and smallest value of  $x \times y$ ?
11. The mean daily high temperature in Rankin Inlet, Nunavut, during one week in January was  $-20^\circ\text{C}$ . What might the temperatures have been on each day of the week? How many different possible answers can you find? Explain.

