

### **TOOL// 3-Part Math Assessment Intermediate**

#### What is the tool?

This tool is a 3-part assessment for math that includes:

- a pre-test to provide data for formative purposes,
- a framework for students to make study notes based on teacher feedback and self-assessment.
- a final summative assessment.

#### What is it used for?

The tool allows students to identify what they need to learn, and to take responsibility for developing a plan to achieve their learning goals, related to a specific math unit.

The tool is used for assessment for learning and assessment of learning.

### How do you use it?

At the beginning of a unit, students are given a formative pre-test that is entirely knowledge-based. The teacher returns this quiz without marks, but with notes to indicate areas of weakness in knowledge.

The students work with a partner to review the teacher's feedback on their pre-test and highlight those areas where they need to improve their understanding.

Following the formative quiz, students are given an outline of what will be covered in the unit.

Throughout the unit, students refer to the outline, and to their pre-test that has areas for improvement highlighted, to create study notes. These study notes are to be handed in on the day of the test.

After the final test is assessed, a package is sent home that includes a letter of explanation to parents, the formative quiz, the student's study notes, and the final assessment which student and parents are to sign and return.

	ee Part Math Assessment native Math Quiz: ne:
	place value comparing and ordering whole numbers and decimal numbers standard and expanded form rounding estimating scientific notation powers and square roots
KNO	WLEDGE
1.	Write the place value of the underlined numbers
A) B) C)	73 <b>9</b> 05 2 <b>3</b> 47 562 456.0 <b>8</b>
2.	Put the following numbers in order from greatest to least
A)	7 030 400, 70 000 200, 78 330, 790 300, 709 400, 70 800
B)	4.099, 4.9, 41.0, 4.7, 4.07, 4.17, 30
3.	Write the following numbers in standard form.
A)	twenty three million seven hundred two thousand eight hundred five
В)	five hundred sixty two thousand three and seven hundred twenty two
Thous	sandths
C)	(2 x 1 000 000) + (9 x 10 000) + (1 x 1000) + (4 x 100) + (7 x 0.1)

4.	Write the following numbers in expanded form.
A)	340 506
B)	203.045
5.	Write the following numbers in scientific notation (powers of 10)
A)	3 067 020
B)	19.507
6.	Round the following numbers to the place given.
A)	579 032 to the nearest ten thousand
B)	9053 to the nearest ten
C)	8.045 to the nearest thousandth
7.	Estimate the sum of the following numbers. Show your work (Grade 8 show all 4 methods)
	247 + 121 + 376 + 810
Solve	the following
3 <sup>2</sup>	B) 5 <sup>3</sup> C) 2 <sup>6</sup>
√36	E) $\sqrt{9}$

8.

A)

D)

### **Number Sense and Numeration Review**

You should know the following for your upcoming math test:

- represent whole numbers and decimal numbers in words, standard form, expanded form, and value in terms of their place value
- arrange whole numbers and decimals in sequential order
- round whole and decimal numbers (100 million to thousandths)
- use estimation strategies (front-end estimation, clustering, compatible numbers, rounding)
- powers of a number and square roots
- how to find all of the factors of a number
- the difference between prime and composite numbers
- how to show a number as a product of its prime factors
- how to find multiples of a number
- how to find the greatest common factor of a set of numbers
- how to find the lowest common multiple of a set of numbers
- how to solve word problems involving any of the above (at least 2 for notes)

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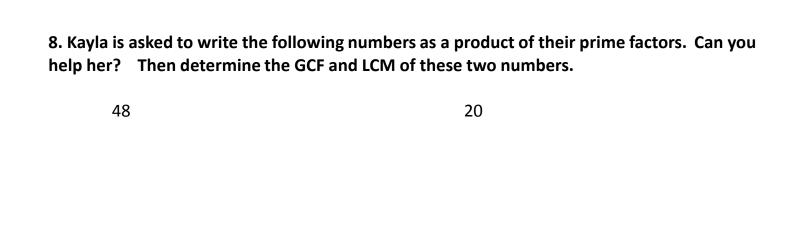
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# Number Sense Unit Test (Grade 8)

NAME:
KNOWLEDGE
1. Help Cameron write the following numbers in words:
12.045
21 048 409
0.976
2. Help Amirreza write the following numbers in standard form:
3 x 10 000 000 + 4 x 100 000 + 2x 100 + 1 + 7 x 0.01
2x 10 + 5 x 0.1 + 3 x 0.01
3. Delenia has been asked to put the following in expanded form:
42 005 783
6.790
30 406.03

42 394.092	5 005 290.527
to the nearest hundred	to the nearest hundred
to the nearest ten	to the nearest ten
to the nearest tenth	to the nearest tenth
to the nearest hundredth	
	to the nearest hundredth
5. Help Maddy list the first 4 multiples of the	following numbers:
A) 6	
B) 8	
C) 9	
6. Edward is asked to write the factors of the	following numbers. Can you help him?
36	9
7. Write the following numbers in scientific n	otation:
A) 2 304 550	
в) 376.092	

4. Will has been asked to round the following numbers:



9. Jason is asked to estimate the sum of following numbers using 4 estimation methods.

187, 176, 154, 207

## **THINKING**

1. Jessica, Sarah, and Vincent are following music in Mr. Arnold's class. Jessica is playing the triangle on every second beat. Sarah is playing the cymbals on every fourth beat. Vincent is playing the tambourine on every seventh beat. On what beat will all three students all play their instruments at the same time.

2. Timmy and Anita decide to organize a dodgeball tournament at lunch recess and they ask that any student from grade 6—8 who is interested to come to a meeting. At recess 24 grade 6 students arrive along with 48 grade 7 students and 36 grade 8 students. Timmy and Anita decide to create EQUAL teams but to keep the **grades separate**. What is the greatest number of students on each team making sure that all of the teams are equal? How many teams are then formed in each grade?

# **COMMUNICATION**

1.	Explain the term 'multiple'.
2.	Explain the term 'factor'.
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ΑP	<u>PLICATION</u>
1 Ev	rolain how the math you have covered in this unit can apply to everyday life
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