Self-Assessment for Grade 9 Locally Developed Math (MAT1L)

Students who are registered for Grade 9 Locally Developed Math (MAT1L) may benefit from a self evaluation and review of the following expectations from elementary school math.

The questions in this self-assessment reflect some of the key ideas learned in prerequisite courses. They do not represent the problem solving approach or the rich experience that students would be exposed to in a classroom. The intention is for students to revisit some key concepts and, if needed, access review materials in an informal environment at a pace that is comfortable for the student.

Concept(s)	Sample Question	How comfortable do you feel with this concept?	Link(s) to explore concept further
I can order whole numbers and decimal numbers **I can order fractional amounts with unlike denominators, including proper and improper fractions and mixed numbers**	1. Write the following numbers in order from least to greatest: a) 30 0.04 0.2 1.95 0.15 b) 0.8 0.08 8.08 8 c) $\dfrac{5}{4}$ $\dfrac{3}{4}$ $\dfrac{3}{2}$ $\dfrac{5}{2}$ $2\dfrac{1}{4}$	☐ Very comfortable ☐ Somewhat comfortable ☐ Not at all comfortable	Comparing Decimals Ordering Decimals Different Denominators Comparing Fractions Mixed Numbers and Improper Fractions
I can print whole numbers in words	2. In 2019, there were 41, 205 secondary students in York Region District School Board. Write out this number in words.	☐ Very comfortable ☐ Somewhat comfortable ☐ Not at all comfortable	Writing Numbers in Words

I can estimate quantities using benchmarks of 10%, 25%, 50%, 75%, and 100%	3. A student is walking from home to school. If the student gets to the park, what percent of the distance has the student covered? Home Park School	☐ Very comfortable ☐ Somewhat comfortable ☐ Not at all comfortable	[Meaning of Percent](#)
I can solve problems that arise from real-life situations	4. How many seconds are there in a day?	☐ Very comfortable ☐ Somewhat comfortable ☐ Not at all comfortable	[How Many Seconds Are There In One Day?](#)
I can add and subtract decimal numbers **I can multiply decimal numbers by whole numbers** **I can divide decimal numbers by whole numbers**	5. Evaluate: a) $9.43 + 2.6$ b) 3×0.2 c) $6.5 \div 5$	☐ Very comfortable ☐ Somewhat comfortable ☐ Not at all comfortable	[Adding decimals with ones, tenths and hundredths](#) [Introduction to multiplying decimals](#) [Dividing a decimal by a whole number](#)

I can represent ratios found in real-life contexts	6. A coin was flipped 20 times. Heads came up 8 times. What is the ratio of number of heads to number of tails?	☐ Very comfortable ☐ Somewhat comfortable ☐ Not at all comfortable	Introduction to ratios | Ratios, proportions, units, and rates
I can represent relationships using unit rates	7. Four markers cost $5.16. How much does one marker cost?	☐ Very comfortable ☐ Somewhat comfortable ☐ Not at all comfortable	Solving unit rates problem | Ratios, proportions, units, and rates
I can solve problems requiring conversion from larger to smaller metric units	8. A rug is 2.5 **metres** wide. How many **centimetres** wide is it?	☐ Very comfortable ☐ Somewhat comfortable ☐ Not at all comfortable	Metric system: units of distance

Solutions to sample questions

1. Write the following numbers in order from least to greatest:

a. 30   0.04   0.2   1.95   0.15

One way to sort these numbers is to start by writing them all with two digits after the decimal place.

30.00   0.04   0.20   1.95   0.15

Then we look at the place values to help us sort.

0.04   0.15   0.20   1.95   30.00

So the original list sorted is

0.04   0.15   0.2   1.95   30

b. 0.8 0.08 8.08 8

One way to sort these numbers is to start by writing them all with two digits after the decimal place.

0.80   0.08   8.08   8.00

Then we look at the place values to help us sort.

0.08   0.80   8.00   8.08

So the original list sorted is

0.08   0.8   8   8.08

C. $\dfrac{5}{4}$ $\dfrac{3}{4}$ $\dfrac{3}{2}$ $\dfrac{5}{2}$ $2\dfrac{1}{4}$

One way to sort this list is to write all of the fractions with the same denominator. Note that $2\frac{1}{4}$ is the same as $2+\frac{1}{4}$ which is the same as $\frac{8}{4}+\frac{1}{4}$ or $\frac{9}{4}$

$$\frac{5}{4} \qquad \frac{3}{4} \qquad \frac{6}{4} \qquad \frac{10}{4} \qquad \frac{9}{4}$$

We can now sort this list

$$\frac{3}{4} \qquad \frac{5}{4} \qquad \frac{6}{4} \qquad \frac{9}{4} \qquad \frac{10}{4}$$

So the original list in sorted order is

$$\frac{3}{4} \qquad \frac{5}{4} \qquad \frac{3}{2} \qquad 2\frac{1}{4} \qquad \frac{5}{2}$$

2. In 2019, there were 41, 205 secondary students in York Region District School Board. Write out this number in words.

There were forty one thousand two hundred and five secondary students in YRDSB.

3. A student is walking from home to school. If the student gets to the park, what percent of the distance has the student covered?

Home   Park School

Since the student has walked 3 of the 4 parts and we know that $\frac{3}{4}$ **is 75%, the student has covered 75% of the distance.**

4. How many seconds are there in a day?

There are 60 seconds in 1 minute and 60 minutes in an hour. There are 24 hours in a day. So the number of seconds in a day is $60\times 60\times 24=86\,400$ **seconds in a day.**

5. Evaluate:

   a) $9.43 + 2.6$

$9.43 + 2.6 = 9.43 + 2.60 = 12.03$

   a) 3×0.2

$3 \times 0.2 = 0.6$

   b) $6.5 \div 5$

$6.5 \div 5 = 65 \div 50$

$$\frac{65}{50} = \frac{13}{10}$$

$$\frac{13}{10} = 1.3$$

6. A coin was flipped 20 times. Heads came up 8 times. What is the ratio of number of heads to number of tails?

If there were 8 heads, then there were 12 tails. The ratio is 8:12 or 2:3.

7. Four markers cost $5.16. How much does one marker cost?

$5.16 \div 4 = 1.29$. **Each marker costs $1.29**

8. A rug is 2.5 **metres** wide. How many **centimetres** wide is it?

1 metre is 100 centimetres so 2 meters is 200 centimetres. Half a metre is 50 centimetres. So 2.5 metres is 250 centimetres.