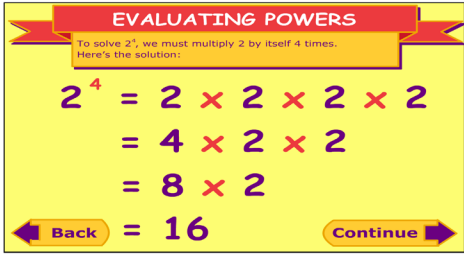
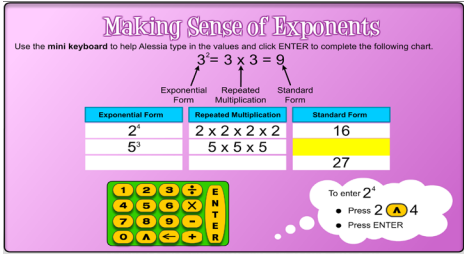
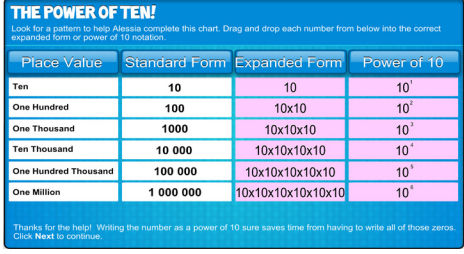


Grade 8 Number Sense and Numeration Ontario Educational Resources Bank (OERB) Activities

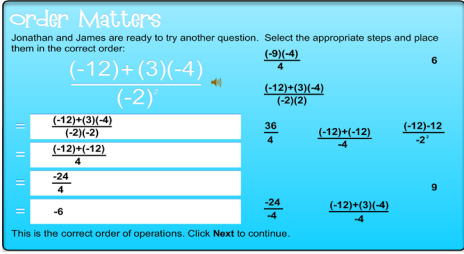
Quantity Relationships

Activity	Description
<p style="text-align: center;">Exponents: Grade 8 Mathematics</p>  <p style="text-align: center;">Resource ID: ELO1033350</p>	<p>Build understanding of representing whole numbers in expanded form using powers of ten by viewing an illustrated explanation of the meaning of a power and how to find its value. Practise evaluating powers by matching powers with their values.</p>

<p style="text-align: center;">Exponents Part 1</p>  <p style="text-align: center;">Resource ID: ELO1414850</p>	<p>Build understanding of exponential notation by viewing a sample Frayer Model of “Powers” and an explanation of how to express powers as repeated multiplication. Explore multiple power representations of a number, as well as practise evaluating powers and representing repeated multiplications in exponential form.</p>
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<p style="text-align: center;">Exponents Part 2: The Power of Ten</p>  <p style="text-align: center;">Resource ID: ELO1414860</p>	<p>Practise representing whole numbers in expanded form by using powers of ten and comparing whole numbers in expanded form, after viewing a sample place mat of how to represent a number in different ways and some guided instruction.</p>
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Operational Sense

Activity	Description
<p style="text-align: center;">Order Matters</p>  <p style="text-align: center;">Resource ID: ELO1414880</p>	<p>Build understanding of order of operations by comparing and analysing solutions to a multi-step problem. Practise order of operations by properly sequencing a given set of steps to the solution of a problem and by solving a multi-step money problem.</p>

Grade 8 Number Sense and Numeration Ontario Educational Resources Bank (OERB) Activities

Operational Sense (Continued)

Activity

Description

Order of Operations Part 2

Order of Operations

Emily and I have solved this expression one step at a time: $20 - 5 [4 + (-2)]$

Click on the correct work at each step:

	Emily	Rocio
step 1	$= 15 [4 + (-2)]$	$= 20 - 5 [2]$
step 2	$= 20 - (-10)$ ✓	$= 20 - 7$
step 3	$= 30$ ✓	$= 10$

There are three correct steps between the two of us. So, three pennies go into the piggy bank. Click **Next** to continue.

Resource ID: ELO1417920

Practise differentiating between correct and incorrect steps and evaluating multi-step expressions by reviewing BEDMAS (the acronym for the correct order of operations), and a set of algorithms for adding, subtracting, multiplying, and dividing integers.

Proportional Relationships

Activity

Description

Guitar Star Part 1: Percents Greater than 100

Guitar Star Part 1: Percents Greater than 100

Help Anita figure out how much she is over her budget. The total cost of the items that she wants to buy is 122% of \$380. Fill in the blanks and use the **calculator** to find out how much Anita's wish-list items cost.

Write 122% as a decimal. If you need to check how to do this, click on **Math Tips**.

$122\% = 1.22 \times \$380 = 463.60$ ✓

Multiply the decimal by Anita's savings.

MATH TIPS

Click **Next** to continue.

Resource ID: ELO1413860

Practise writing percents as decimals and calculating the percent of a number, including percents over 100% by solving problems that involve percents.

Guitar Star Part 2

Guitar Star Part 2: Problem-Solving with Percent

Fill in each row of the chart to determine the sale price of the guitar case that Anita has selected, including the 13% HST (Harmonized Sales Tax).

Guitar case	\$49.99
Regular price	
Minus 30% discount	\$ 15.00
Sale price	\$ 34.99
Plus 13% HST	\$ 4.65
Final Price	\$ 39.54 ✓

★ 30% OFF ★

Click **Next** to continue.

Resource ID: ELO1413870

Practise solving a variety of problems involving percent by finding discounts, calculating the sale price and calculating the final price including HST.

Which is the Better Deal?

Which is the Better Deal?

The next item on the list to buy is eggs. For each option, type the cost and the quantity into the equation. Use the **calculator** to determine the unit rate per egg. Then type in your answer.

Option A:	Unit rate = \$ 2.19 ÷ 12 = \$ 0.18 /egg
Option B:	Unit rate = \$ 3.96 ÷ 18 = \$ 0.22 /egg
Option C:	Unit rate = \$ 5.10 ÷ 30 = \$ 0.17 /egg ✓

Click **Next** to find the best buy on toilet paper.

Resource ID: ELO1411780

Practise solving problems involving rates to find the best deal by calculating and comparing the unit rates of a variety of grocery items, after viewing a demonstration of how to determine unit rates.