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Term Two Curriculum Newsletter
2020-2021

6/7A Math

6/7A- Grade 6

Math
Proportional Relationships & Operations with Fractions
Using proportional reasoning <ul style="list-style-type: none">- use mental math strategies to calculate percents of whole numbers, including 1%, 5%, 10%, 15%, 25%, and 50%, and explain the strategies used- solve problems involving ratios, including percents and rates, using appropriate tools and strategies- add and subtract fractions with like and unlike denominators, using appropriate tools, in various contexts- multiply whole numbers by proper fractions, using appropriate tools and strategies- divide whole numbers by proper fractions, using appropriate tools and strategies
Patterns and Probability
Creating patterns and code, and making predictions about them <ul style="list-style-type: none">- identify and describe repeating, growing, and shrinking patterns, including patterns found in real-life contexts, and specify which growing patterns are linear- create and translate repeating, growing, and shrinking patterns using various representations, including tables of values, graphs, and, for linear growing patterns, algebraic expressions and equations- determine pattern rules and use them to extend patterns, make and justify predictions, and identify missing elements in repeating, growing, and shrinking patterns, and use algebraic representations of the pattern rules to solve for unknown values in linear growing patterns- solve equations that involve multiple terms and whole numbers in various contexts, and verify solutions
Expressing and predicting probability <ul style="list-style-type: none">- use fractions, decimals, and percents to express the probability of events happening, represent this probability on a probability line, and use it to make predictions and informed decisions- determine and compare the theoretical and experimental probabilities of two independent events happening
Coding can be used to create patterns, check predictions, and simulate probabilities <ul style="list-style-type: none">- solve problems and create computational representations of mathematical situations by writing and executing efficient code, including code that involves conditional statements and other control structures- read and alter existing code, including code that involves conditional statements and other control structures, and describe how changes to the code affect the outcomes and the efficiency of the code

Operations and Measurement

Developing fluency with adding, subtracting, multiplying, and dividing

- use the properties of operations, and the relationships between operations, to solve problems involving whole numbers, decimal numbers, fractions, ratios, rates, and whole number percents, including those requiring multiple steps or multiple operations
- represent and solve problems involving the addition and subtraction of whole numbers and decimal numbers, using estimation and algorithms
- represent and solve problems involving the multiplication of three-digit whole numbers by decimal tenths, using algorithms
- represent and solve problems involving the division of three-digit whole numbers by decimal tenths, using appropriate tools, strategies, and algorithms, and expressing remainders as appropriate
- represent and solve problems involving the division of decimal numbers up to thousandths by whole numbers up to 10, using appropriate tools and strategies
- evaluate algebraic expressions that involve whole numbers and decimal tenths

Financial Literacy & Operations involving Money

Developing financial concepts

- describe the advantages and disadvantages of various methods of payment that can be used to purchase goods and services
- identify different types of financial goals, including earning and saving goals, and outline some key steps in achieving them
- identify and describe various factors that may help or interfere with reaching financial goals
- explain the concept of interest rates, and identify types of interest rates and fees associated with different accounts and loans offered by various banks and other financial institutions
- describe trading, lending, borrowing, and donating as different ways to distribute financial and other resources among individuals and organizations

Using operations and mental math to solve problems involving purchases

- use the properties of operations, and the relationships between operations, to solve problems involving whole numbers, decimal numbers, fractions, ratios, rates, and whole number percents, including those requiring multiple steps or multiple operations
- solve problems and create computational representations of mathematical situations by writing and executing efficient code, including code that involves conditional statements and other control structures
- read and alter existing code, including code that involves conditional statements and other control structures, and describe how changes to the code affect the outcomes and the efficiency of the code

6/7A- Grade 7

<p>Math</p> <p>Patterns and Probability</p> <p>Comparing measures spatially</p> <ul style="list-style-type: none">- identify and compare a variety of repeating, growing, and shrinking patterns, including patterns found in real-life contexts, and compare linear growing patterns on the basis of their constant rates and initial values- create and translate repeating, growing, and shrinking patterns involving whole numbers and decimal numbers using various representations, including algebraic expressions and equations for linear growing patterns- determine pattern rules and use them to extend patterns, make and justify predictions, and identify missing elements in repeating, growing, and shrinking patterns involving whole numbers and decimal numbers, and use algebraic representations of the pattern rules to solve for unknown values in linear growing patterns- draw top, front, and side views, as well as perspective views, of objects and physical spaces, using appropriate scales- solve equations that involve multiple terms, whole numbers, and decimal numbers in various contexts, and verify solutions <p>Identifying patterns in real-life can include noticing patterns involving probability</p> <ul style="list-style-type: none">- describe the difference between independent and dependent events, and explain how their probabilities differ, providing examples- determine and compare the theoretical and experimental probabilities of two independent events happening and of two dependent events happening <p>Using coding to create patterns, check predictions and simulate probability experiments</p> <ul style="list-style-type: none">- solve problems and create computational representations of mathematical situations by writing and executing efficient code, including code that involves events influenced by a defined count and/or sub-program and other control structures- read and alter existing code, including code that involves events influenced by a defined count and/or sub-program and other control structures, and describe how changes to the code affect the outcomes and the efficiency of the code <p>Circles, Patterning, & Algebraic Expressions</p> <p>Constructing circles</p> <ul style="list-style-type: none">- construct circles when given the radius, diameter, or circumference <p>Using the formula for the area of a circle</p> <ul style="list-style-type: none">- round decimal numbers to the nearest tenth, hundredth, or whole number, as applicable, in various contexts- evaluate algebraic expressions that involve whole numbers and decimal numbers- solve equations that involve multiple terms, whole numbers, and decimal numbers in various contexts, and verify solutions- use the relationships between the radius, diameter, and circumference of a circle to explain the formula for finding the circumference and to solve related problems- show the relationships between the radius, diameter, and area of a circle, and use these relationships to explain the formula for measuring the area of a circle and to solve related problems <p>Representing and extending patterns</p>

- create and translate repeating, growing, and shrinking patterns involving whole numbers and decimal numbers using various representations, including algebraic expressions and equations for linear growing patterns
- determine pattern rules and use them to extend patterns, make and justify predictions, and identify missing elements in repeating, growing, and shrinking patterns involving whole numbers and decimal numbers, and use algebraic representations of the pattern rules to solve for unknown values in linear growing patterns

Operations & Measurements

Developing fluency with operations and equations

- evaluate algebraic expressions that involve whole numbers and decimal numbers
- use the properties and order of operations, and the relationships between operations, to solve problems involving whole numbers, decimal numbers, fractions, ratios, rates, and percents, including those requiring multiple steps or multiple operations
- round decimal numbers to the nearest tenth, hundredth, or whole number, as applicable, in various contexts
- identify and represent perfect squares, and determine their square roots, in various contexts
- represent cylinders as nets and determine their surface area by adding the areas of their parts
- solve equations that involve multiple terms, whole numbers, and decimal numbers in various contexts, and verify solutions

Solving measurement problems

- solve problems and create computational representations of mathematical situations by writing and executing efficient code, including code that involves events influenced by a defined count and/or sub-program and other control structures
- read and alter existing code, including code that involves events influenced by a defined count and/or sub-program and other control structures, and describe how changes to the code affect the outcomes and the efficiency of the code
- show that the volume of a prism or cylinder can be determined by multiplying the area of its base by its height, and apply this relationship to find the area of the base, volume, and height of prisms and cylinders when given two of the three measurements
- describe the differences and similarities between volume and capacity, and apply the relationship between millilitres (mL) and cubic centimetres (cm³) to solve problems
- solve problems involving perimeter, area, and volume that require converting from one metric unit of measurement to another

Financial Literacy & Operations involving Money

Developing financial concepts

- identify and describe various reliable sources of information that can help with planning for and reaching a financial goal
- create, track, and adjust sample budgets designed to meet longer-term financial goals for various scenarios
- identify various societal and personal factors that may influence financial decision making, and describe the effects that each might have
- explain how interest rates can impact savings, investments, and the cost of borrowing to pay for goods and services over time
- compare interest rates and fees for different accounts and loans offered by various financial institutions, and determine the best option for different scenarios

Using operations and mental math to solve problems involving purchases

- use the properties and order of operations, and the relationships between operations, to solve problems involving whole numbers, decimal numbers, fractions, ratios, rates, and percents, including those requiring multiple steps or multiple operations

