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Ontario Math Curriculum

Algebra – Patterns, Equations – Grade 7

3-Part Lesson Format

Part 1 – Minds On!

- Learning Goals
- Discussion Questions
- Quotes
- And More!

LEARNING GOAL

We are learning to identify and describe repeating and growing patterns to understand how they work and how they connect to math and real-life examples.

Repeating A/B Patterns

Label the A/B patterns below and then drag the shapes to extend the pattern. Answer the questions below.

1)																
	A	B	C	C	A	B	C	C	A	B	C	C	A	B	C	C

a) What will the 16th term in the pattern be?
 b) What will the 33rd term in the pattern be?

2)																
	A	B	C	B	A	A	B	C	B	A	A	B	B	A	A	B

a) What will the 20th term in the pattern be?
 b) What will the 45th term in the pattern be?

Part 2 – Action!

- Writing
- Matching
- Drag and Drop
- Drawing
- And More!

Part 3 – Consolidation!

- Exit Cards
- Quizzes
- Reflection
- And More!

Consolidation – Multiple-Choice Questions

Drag the checkmark to answer the following multiple-choice questions about the topic.

<p>1) Which pattern is increasing, but not by a constant amount each time?</p> <p>1) 10, 12, 14, 16, 18</p> <p>2) 1, 2, 4, 8, 16</p> <p>3) 3, 6, 9, 12, 15</p> <p>4) 30, 25, 20, 15, 10</p>	<p>2) The pattern 4, 9, 14, 19, 24 can be described by which rule?</p> <p>1) Start at 4 and multiply by 5 each time</p> <p>2) Start at 9 and add 4 each time</p> <p>3) Start at 4 and add 4 each time</p> <p>4) Start at 4 and add 5 each time</p>	<p>3) Which statement best describes how these two patterns grow? Pattern A: 6, 9, 12, 15, 18 Pattern B: 6, 12, 24, 48, 96</p> <p>1) Both patterns increase by adding the same number each time</p> <p>2) Pattern A increases by multiplication; Pattern B increases by addition</p> <p>3) Pattern A increases by addition; Pattern B increases by multiplication</p> <p>4) Both patterns increase by multiplying by the same number each time</p>
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Ontario Math Curriculum

Algebra - Patterns, Equations - Grade 7

Decreasing Pattern Rules

Fill in the boxes and blanks to complete the patterns by figuring out the pattern rules.

#	PATTERN				RULE	
1)	420	400	380			Start at _____, then subtract _____ each time
2)	335	320	305			Start at _____, then subtract _____ each time
3)	222	215	208			Start at _____, then subtract _____ each time
4)	504	490	476			Start at _____, then subtract _____ each time
5)	626	617	608			Start at _____, then subtract _____ each time

Rule: add 11

In	Out
452	
	765

Rule: multiply 4

In	Out
11	
	88

Rule: subtract 7


In	Out
386	
	590

Rule: divide 6

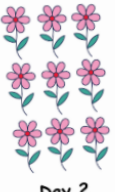
In	Out
36	
	13

Translate the increasing pattern below:

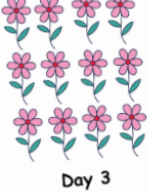
A gardener plants flowers in a row. On Day 1, there are 6 flowers planted. Each day after that, 3 more flowers are added.




Day 1



Day 2

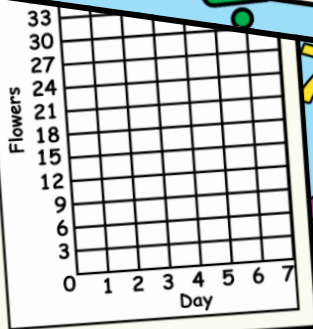


Day 3



Day 4

Term Number (Day)	1	2	3	4	5	9	15
Term Value (Flowers)							





Ontario Math Curriculum

Algebra - Patterns, Equations - Grade 7

Linear and Non-Linear Patterns

Look at the patterns below and fill in the table of values. Then, complete the graph. Is the line straight?

Term Number	1	2	3	4	5
Term Value					

Is this pattern linear or non-linear? Explain.

How many blocks would be in term number 12th?

Bridge w

A class is competing to build the longest bridge using toothpicks. To save toothpicks, the squares are connected so they share one side.

Term Number (Squares)	1	2	3	4	5	20
Term Value (# of toothpicks)						

Write an algebraic expression that represents the function.

2) If you have exactly 34 toothpicks, how many connected squares can you build?

Flow Chart

Complete the flow chart.

2) $b + 11 = 34$	5) $e - 13 = 54$
3) $c - 6 = 43$	6) $f + 15 = 68$
4) $d + 8 = 32$	7) $g - 20 = 79$
	8) $h + 25 = 83$



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Ontario Math Curriculum Financial Literacy – Grade 7

3-Part Lesson Format

Part 1 – Minds On!

- Learning Goals
- Discussion Questions
- Quotes
- And More!

Exchange Rates

Learning Goal

We are learning to understand how exchange rates work and why currencies have different values, so we can compare money from different countries and calculate how much it is worth when travelling or making international purchases.

Exchange Rates

Convert money from other currencies to Canadian dollars.

Money	Currency	CAD
£78	British Pound	
¥500	Japanese Yen	
€100	Euro	
£35	British Pound	
¥220	Japanese Yen	
\$12	U.S. Dollar	
CHF50	Swiss Franc	
€43	Euro	

Currency	Value in Canadian Dollars (CAD)
1 EUR (Euro)	1.62 CAD
1 USD (U.S. Dollar)	1.40 CAD
1 GBP (British Pound)	1.85 CAD
1 JPY (Japanese Yen)	0.008 CAD
1 CHF (Swiss Franc)	1.74 CAD

\$16.80	\$87.00	\$64.75
\$16.50	\$144.30	\$162
\$4.00	\$69.66	\$1.76

Part 2 – Action!

- Writing
- Matching
- Drag and Drop
- Drawing
- And More!

Part 3 – Consolidation!

- Exit Cards
- Quizzes
- Reflection
- And More!

Consolidation

Put the mark on the correct answer. ✓

Question	A	B	C
1) What is an exchange rate?	The amount of money a bank charges for using a credit card	A rate that compares the value of one currency to another	A plan for how people save and spend money
2) If 1 USD = 1.40 CAD, which statement is true?	1 USD is worth more than 1 CAD	1 USD is worth less than 1 CAD	1 USD and 1 CAD are equal
3) Why do exchange rates change over time?	Because governments randomly decide new prices	Because currencies rise or fall based on economic factors	Because stores update prices every day
4) Which of the following would likely make a currency stronger?	High inflation	Large government debt	Strong political stability
5) If 1 EUR = 1.62 CAD, which is closest to the value of 10 EUR in CAD?	10.00 CAD	16.20 CAD	162.00 CAD
6) If a country exports more than it imports, what might happen to its currency value?	It may become stronger	It may become weaker	It will disappear completely



Ontario Math Curriculum Financial Literacy – Grade 7



Gross vs Net Income



Determine the correct net income and income tax.

Gross Income	Income Tax	Net Income
\$345,429		
\$185,619		
\$38,462		
\$75,532		
\$110,485		

Gross Income Bracket	Avg. Tax Rate
\$0 - \$50,000	8%
\$50,000 - \$100,000	12%
\$100,000 - \$150,000	15%
\$150,000 - \$200,000	18%
\$200,000 or more	22%

\$3,076.96	\$66,468.16	\$269,434.62	\$9,063.84	\$33,411.42
\$152,207.58	\$19,887.3	\$90,597.7	\$75,994.38	\$35,385.04

Budgets



Two Truths and a Lie

Read the statements below and decide which one is the lie.

A) A budget helps you track how much money you earn and spend.	B) Budgets prevent all unexpected costs from happening.	C) Budgets can help you reach your financial goals.
A) A budget can show you how much money you can save each month.	B) Planning ahead with a budget helps you avoid overspending.	C) Budgets only matter for adults with jobs.
A) You never need to change a budget once you make it.	B) A budget is a plan you follow to keep track of your money.	C) Budgets help you make smarter choices about how you use your money.
A) Sticking to a budget can help you reach long-term financial goals.	B) A budget should include both needs and wants.	C) A budget works best when you don't track your spending regularly.

A bank pays you a 6.5% interest for every \$100 dollars

Amount Saved	6.5% Interest
\$400	
\$600	
\$1100	
\$2300	
\$1800	
\$2500	

\$360	\$102.50
\$71.50	\$325
\$39	\$15
\$650	\$26
\$110	\$315
\$117	\$149.50



Ontario Math Curriculum Financial Literacy – Grade 7

Introduction to Interest

Circle the words in the wordsearch

Principal	Interest
Rate	Borrow
Lend	Annual
Savings	Growth
Payment	Loan
Deposit	Profit

Word Search Grid:

```

I K J X P I P H C F T H D K D O
B V B J V J C N Z H N G F G B O
K Y O P B H G A O C Z V V V E L
G F R M S W J S N G R O W T H O
T I R I D N F G Y N Y M M W H A
M N O P F U P S T I U T W L W N
S T W V V K M A A A Y A T C M F
D E P O S I T A Y V V X L F R F
P R I N C I P A L M I I A M A R
L E N D N U B B Z K E N V T T Y
H S P R O F I T K M D N G L E H
Z T H V U Z D Q L T F D T S J R
  
```

Calculate the costs of Ava's habits

Maple Bank – Student Essentials Plan

- ✓ Free monthly fee
- ✓ 10 free debit transactions per month, \$0.85 each after that
- ✓ 5 free e-Transfers, \$1.25 each afterward
- ✓ Using non-Maple Bank ATMs in Canada – \$2.50 per withdrawal
- ✓ Using debit card outside Canada – \$1.50 per purchase

Maple Bank – Student Premium Plan

- ✓ \$10.50 monthly fee
- ✓ 20 free debit transactions per month, \$0.85 each after that
- ✓ 5 free e-Transfers, \$1.10 each afterward
- ✓ \$1.45 per withdrawal using non-Maple ATMs
- ✓ No charge for using debit card outside of Canada

Description of Ava's Financial Habits	Essential	Premium
Ava makes 14 debit transactions each month.	\$0	\$3.75
She sends 8 e-Transfers to friends.	\$2.90	\$0
She withdraws cash twice from non-Maple Bank ATMs.	\$3.40	\$3.30
She makes 2 purchases using her debit card in America.	\$5	\$3

Understanding Loans

Calculate the total interest rate owed after 3 years, if the prime rate is 2.2%.

Loan Amount	Prime + 3%
\$5,500	
\$17,500	
\$12,850	
\$19,000	
\$27,800	
\$32,250	

Interest Options:

- \$4336.80
- \$988
- \$4363
- \$2730
- \$2370.50
- \$2964
- \$6030
- \$858
- \$1677.50
- \$5031
- \$2004.60
- \$910



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Ontario Math Spatial Sense Unit – Grade 7

3-Part Lesson Format

Part 1 – Minds On!

- Learning Goals
- Discussion Questions
- Why Math Is Important
- And More!

Learning Goal

We are learning to describe and classify cylinders, pyramids, and prisms by their shapes and properties so we can better understand how to recognize and compare 3D objects in geometry.



Lines in 3D Objects - Prisms

Drag and label the lines as parallel, perpendicular or intersecting.

			Parallel Lines
			Perpendicular Lines
			Intersecting Lines

Part 2 – Action!

- Questions
- Matching
- Drag and Drop
- Videos
- And More!

Part 3 – Consolidation!

- Exit Cards
- Word Problems
- Quizzes
- Student Created Quizzes

Consolidation – Multiple-Choice Questions

Drag the checkmark to answer the following multiple-choice questions about the topic.

<p>1) How many faces does a triangular prism have?</p> <table border="1"> <tr><td>1) 3</td><td><input type="checkbox"/></td></tr> <tr><td>2) 4</td><td><input type="checkbox"/></td></tr> <tr><td>3) 5</td><td><input type="checkbox"/></td></tr> <tr><td>4) 6</td><td><input type="checkbox"/></td></tr> </table>	1) 3	<input type="checkbox"/>	2) 4	<input type="checkbox"/>	3) 5	<input type="checkbox"/>	4) 6	<input type="checkbox"/>	<p>2) If you cut a cylinder with a plane parallel to its base, the cross-section will be:</p> <table border="1"> <tr><td>1) A rectangle</td><td><input type="checkbox"/></td></tr> <tr><td>2) A circle</td><td><input type="checkbox"/></td></tr> <tr><td>3) A triangle</td><td><input type="checkbox"/></td></tr> <tr><td>4) An ellipse</td><td><input type="checkbox"/></td></tr> </table>	1) A rectangle	<input type="checkbox"/>	2) A circle	<input type="checkbox"/>	3) A triangle	<input type="checkbox"/>	4) An ellipse	<input type="checkbox"/>	<p>3) If you rotate a triangular prism around its length (longest axis), how many times will it look the same in a full 360° turn?</p> <table border="1"> <tr><td>1) 1</td><td><input type="checkbox"/></td></tr> <tr><td>2) 2</td><td><input type="checkbox"/></td></tr> <tr><td>3) 3</td><td><input type="checkbox"/></td></tr> <tr><td>4) 4</td><td><input type="checkbox"/></td></tr> </table>	1) 1	<input type="checkbox"/>	2) 2	<input type="checkbox"/>	3) 3	<input type="checkbox"/>	4) 4	<input type="checkbox"/>	<p>4) A rectangular prism has:</p> <table border="1"> <tr><td>1) 4 triangular faces and 1 square base</td><td><input type="checkbox"/></td></tr> <tr><td>2) 6 rectangular faces, 12 edges, and 8 vertices</td><td><input type="checkbox"/></td></tr> <tr><td>3) 2 circular faces and a curved surface</td><td><input type="checkbox"/></td></tr> <tr><td>4) 1 square face and 4 triangular faces</td><td><input type="checkbox"/></td></tr> </table>	1) 4 triangular faces and 1 square base	<input type="checkbox"/>	2) 6 rectangular faces, 12 edges, and 8 vertices	<input type="checkbox"/>	3) 2 circular faces and a curved surface	<input type="checkbox"/>	4) 1 square face and 4 triangular faces	<input type="checkbox"/>
1) 3	<input type="checkbox"/>																																		
2) 4	<input type="checkbox"/>																																		
3) 5	<input type="checkbox"/>																																		
4) 6	<input type="checkbox"/>																																		
1) A rectangle	<input type="checkbox"/>																																		
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1) 1	<input type="checkbox"/>																																		
2) 2	<input type="checkbox"/>																																		
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4) 1 square face and 4 triangular faces	<input type="checkbox"/>																																		



Ontario Math Spatial Sense Unit – Grade 7

Drawing Top, Front, and Side Views of Objects

Look at the front, top, and side views and drag the circle to the matching 3D object.

1	2	3
Top View	Top View	Top View
Front View	Front View	Front View
Side View	Side View	Side View

4	5	6
Top View	Top View	Top View
Front View	Front View	Front View
Side View	Side View	Side View

Views - Real-Life Objects

Draw the sides of the shapes to the vanishing point. Use horizontal lines and vertical lines. The first one is done for you.

Door

Desk

Shoe box

Lamp

Enlargement and Reductions

Use the scale factor to perform enlargements/reductions of the original shape (O). Drag shapes from the shape bank to answer.

1) Scale Factor = 1:2	2) Scale Factor = 3:1

SHAPE BANK



Ontario Math Spatial Sense Unit – Grade 7

Perimeter Formulas

Convert the units and calculate the perimeter of the shapes. **1 2 3 4 5 6 7 8 9 0.**

cm mm m

<p>Perimeter = _____</p>	<p>Perimeter = _____</p>	<p>Perimeter = _____</p>
<p>Perimeter = _____</p>	<p>Perimeter = _____</p>	<p>Perimeter = _____</p>

Area

Find the area of the triangles below ($A = b \times h \div 2$).
Drag the numbers to answer the questions. **mm² cm²**

<p>Area = _____</p>	<p>Area = _____</p>	<p>Area = _____</p>
<p>Area = _____</p>	<p>Area = _____</p>	<p>Area = _____</p>

Radius and Diameter

Drag the numbers to fill in the tables **1 2 3 4 5 6 7 8 9 0**

#	Radius	Diameter
1)	5cm	
2)		19mm
3)		12m
4)	4mm	
5)	11m	

#	Radius	Diameter
6)		28mm
7)	7cm	
8)		54m
9)		92mm
10)	19cm	

cm mm m



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Ontario Math Number Unit – Grade 7

3-Part Lesson Format

Part 1 – Minds On!

- Learning Goals
- Discussion Questions
- Why Math is Important
- And More!

Discussion Questions

- 1) **Big Number Challenge!** – Which number is larger: 67,890,123 or 67,809,123? How can you tell quickly just by looking? What's the most important digit to compare first?
- 2) **What's Missing?** – You see this number: 9_3,215,478. What digit could go in the blank to make the number as small as possible? What about to make it the largest possible?
- 3) **Digit Swap!** – In the number 230,498,761, what happens if you swap the 2 and the 1? How does that change the value of the number? Which digit had a bigger impact on the number's size?

Place Value - How Many...

Number	# of billions	# of Hundred millions	# of Ten millions	# of millions	# of Hundred Thousands	# of Ten Thousands	# of Thousands	# of Hundreds	# of Tens	# of Ones
12 258										
473 189										
5 027 417										
67 298 453										
243 117 338										
1 521 476 008										

Part 2 – Action!

- Questions
- Matching
- Drag and Drop
- Videos
- And More!

Part 3 – Consolidation!

- Exit Cards
- Word Problems
- Quizzes
- Student Created Quizzes

Exit Card: Word Problem

The population of a country is 4 102 376 310. Write this number in expanded form and explain the value of each digit.



Ontario Math Number Unit - Grade 7

Expanded Form

Expanded form is a way of writing a number by showing the value of each digit based on its place.

For example: the number 423 582 624 in its expanded form is written as $400\,000\,000 + 20\,000\,000 + 3\,000\,000 + 500\,000 + 80\,000 + 2\,000 + 600 + 20 + 4$

THINK
What is the standard form of the numbers below?

Expanded Form	Standard Form
$1\,000\,000\,000 + 700\,000\,000 + 30\,000\,000 + 0 + 600\,000 + 40\,000 + 9\,000 + 800 + 30 + 3$	
$5\,000\,000\,000 + 300\,000\,000 + 20\,000\,000 + 7\,000\,000 + 800\,000 + 90\,000 + 4\,000 + 0 + 20 + 0$	

Written Form

Name Matching The Standard Form To The Written Form

Written Form	Standard Form
Two hundred seven million, six hundred sixty-two thousand, four hundred sixty-three	276 183 290
Four hundred seventy-six million, three hundred fifty-four thousand, seven hundred ninety-eight	139 372 527
Nine hundred eight million, one hundred fifty-six thousand, three hundred eighty-seven	390 112 948
Two hundred seventy-six million, one hundred eighty-three thousand, two hundred ninety	908 156 387
One hundred thirty-nine million, three hundred seventy-two thousand, five hundred twenty-seven	476 354 798
Three hundred ninety million, one hundred twelve thousand, nine hundred forty-eight	207 662 463

Comparing Numbers

Drag the correct sign between the numbers.

#	Number 1	Sign	Number 2
1	287 178 352		289 178 352
2	308 189 278		204 143 573
3	736 726 154		736 726 154
4	902 634 335		934 436 767
5	999 999 999		1 000 000
6	273 153 745		273 564 224

#	Number 1	Sign	Number 2
7	210 353 846		210 546 325
8	831 536 746		841 155 956
9	663 543 892		663 423 123
10	804 878 767		804 878 767
11	331 956 213		331 574 853
12	468 657 002		468 314 642



Ontario Math Number Unit - Grade 7

Writing Integers

We can represent a situation using integers. When we have less than zero, we can use a negative integer. When we have more than zero, we use a positive integer. **For example**, the temperature dropped 7 degrees below zero. Therefore, the temperature is -7°C .

Write the integer for the situations below.

- The temperature in a mountain village was -12°C in the morning. By noon, it rose 15°C . What is the new temperature? Write it as an integer.
- A business lost $\$4,000$ last quarter but made a $\$6,000$ profit this quarter. Write both amounts as integers.
- Priya climbed 120 metres above sea level during her hike. Her friend Alex descended 90 metres below sea level while scuba diving. Write both positions as integers.
- A YouTube channel lost 350 subscribers in one week but gained 1,000 subscribers the next. Write both the loss and the gain as integers.

Integers: Comparing Temperatures

Drag the correct sign to compare the temperatures. Which is warmer?

 <input type="text"/>	 <input type="text"/>	 <input type="text"/>	 <input type="text"/>
--------------------------	--------------------------	--------------------------	--------------------------

Fractions, Decimals, and Percents

What fraction, decimal, and percent of the array is shaded in?

Fraction: <input type="text"/> Decimal: <input type="text"/> Percent: <input type="text"/>	Fraction: <input type="text"/> Decimal: <input type="text"/> Percent: <input type="text"/>	Fraction: <input type="text"/> Decimal: <input type="text"/> Percent: <input type="text"/>	Fraction: <input type="text"/> Decimal: <input type="text"/> Percent: <input type="text"/>
Fraction: <input type="text"/> Decimal: <input type="text"/> Percent: <input type="text"/>	Fraction: <input type="text"/> Decimal: <input type="text"/> Percent: <input type="text"/>	Fraction: <input type="text"/> Decimal: <input type="text"/> Percent: <input type="text"/>	Fraction: <input type="text"/> Decimal: <input type="text"/> Percent: <input type="text"/>



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Ontario Math Curriculum Graphing And Probability – Grade 7

3-Part Lesson Format

Part 1 – Minds On!

- Learning Goals
- Discussion Questions
- Quotes
- And More!

REPRESENTING DISTRIBUTION USING PERCENTAGE

Learning Goal

We are learning to **explain why percentages are used to represent the distribution of variables in populations and large data sets, using sample data and comparisons, so we can understand patterns and interpret data more clearly.**

REPRESENTING DISTRIBUTION USING PERCENTAGE

Fill in the tables by adding decimals and percentages. 1 2 3 4 5 6 7 8 9 0 .

Options	Frequency	Decimal	%
Pop	140		
Hip Hop	90		
Rock	50		
Other	20		
Total			

Options	Frequency	Decimal	%
Math	220		
Science	480		
Language	160		
Art	340		
Total			

Options	Frequency	Decimal	%
Dog	3760		
Cat	3130		
Fish	740		
Other	2370		
Total			

Options	Frequency	Decimal	%
Sport	14752		
Video Games	16398		
Reading	9655		
Watching Movie	9195		
Total			

Part 2 – Action!

- Writing
- Matching
- Drag and Drop
- Drawing
- And More!

Part 3 – Consolidation!

- Exit Cards
- Quizzes
- Reflection
- And More!

RELATIVE FREQUENCY VS FREQUENCY TABLES

Fill in the tables and identify their type. ✔ 1 2 3 4 5 6 7 8 9 0 .

Options	Frequency
Comedy	2400
Action	3200
Drama	1600
Horror	800
Total	

Frequency Table Relative Frequency Table



Options	Frequency	Decimal	%
0-19	30		
20-39	45		
40-59	60		
60+	15		
Total			

Frequency Table Relative Frequency Table

Options	Frequency	Decimal	%
Sports Club	4450		
Art Club	3025		
Music Club	1375		
Coding Club	1150		
Total			

Frequency Table Relative Frequency Table



Options	Frequency
Sports	12500
Video Games	25000
Watching TV	8750
Art or Drawing	3750
Total	

Frequency Table Relative Frequency Table



Ontario Math Curriculum Graphing And Probability - Grade 7

MODE

1 2 3 4 5 6 7 8 9 0

Answer the questions below.

1) Ava tracked how many hours she spent studying over 15 days. Her study times (in hours) were: **6, 7, 8, 7, 9, 7, 8, 6, 7, 8, 9, 7, 6, 7, 8**
What number of hours did Ava study most often?

2) Students were asked to choose their favourite type of sport. The results are shown below:
1, 3, 2, 4, 2, 1, 3, 2, 2, 4, 3, 1, 2, 3, 2
Which sport was most popular?

3) A teacher recorded the number of questions students got correct on a quiz:
8, 9, 10, 8, 7, 9, 8, 10, 9, 8, 7, 8
What score occurred most often?

Soccer	1
Basketball	2
Hockey	3
Track	4

Soccer
Basketball
Hockey
Track

MEDIAN

The **median** is the middle value in an **ordered data set**.
It represents the **central position** of the data, not the average.

- The median is **resistant to outliers** (extremely large or small values).

How to find the median?

- Step 1:** Arrange the numbers in order (smallest to largest).
- Step 2:** Determine the total number of values (n).
 - ✓ If **n is odd** → The median is the middle number.
 - ✓ If **n is even** → Add the two middle numbers and divide by 2.

Examples

Data set: 12, 15, 9, 18, 14
Ordered list: 9, 12, 14, 15, 18
Median = 14

Data Set: 8, 10, 14, 30, 22, 18
Ordered list: 8, 10, 14, 18, 22, 30
Middle numbers: 14 & 18
Median = $(14 + 18) / 2 = 16$

The students in grade 5, 6, and 7 were surveyed about their favourite school subject. The results are shown in the multiple-bar graph below.

Favourite School Subject

Subject	#	%	Grade 5	Grade 6	Grade 7
Math	18/150	12			
Science					
English					
Art	30/150	20			
Gym					
Total					

1) How many students in each grade were surveyed?

2) How many votes did the most popular subject receive in total?



Ontario Math Curriculum Graphing And Probability - Grade 7

Answer Page

INTERPRETING A CIRCLE GRAPH

A group of teens were asked to choose their favourite meal. The results are shown in the circle graph below.

- Burgers
- Tacos
- Pasta
- Salad
- Pizza

Tacos

Pasta

Fill in the frequency table and answer the questions.

Votes	Burgers	Tacos	Pasta	Salad	Pizza
	6/30	5/30	3/30	4/30	12/30
%	20%	17%	10%	13%	40%

1) Which meal is the **most popular** among the teens?

2) Do **Tacos, Pasta, and Salad combined** make up more than half of the choices?

3) Which meal represents **one-fifth (20%)** of the choices?

4) What **percentage of teens did NOT** choose pizza?

	Pizza	
Yes	No	
Burgers		60%

INDEPENDENT

A spinner has 6 equal sections labelled 1 to 6. Each number has an equal chance of being landed on.

Find the probability of each sum when the spinner is spun twice.

#	Questions	Answer
1	What is the probability of spinning twice and getting a sum of exactly 7 ?	6/36
2	What is the probability of spinning twice and getting a sum less than 6 ?	10/36
3	What is the probability of spinning twice and getting a sum greater than or equal to 10 ?	6/36

+	1	2	3	4	5	6
1	2	3	4	5	6	7
2	3	4	5	6	7	8
3	4	5	6	7	8	9
4	5	6	7	8	9	10
5	6	7	8	9	10	11
6	7	8	9	10	11	12

... can happen to how

Unfavourable outcomes : Unfavourable outcomes

- Odds consider **all possible outcomes** by separating them into:
 - ✓ Outcomes we **want**
 - ✓ Outcomes we **do not want**
- These are called **complementary outcomes**.

Examples: If you roll a fair die:

- ✓ Probability of rolling a 3 = **1 out of 6**
- ✓ Ways it happens = 1
- ✓ Ways it does **NOT** happen = 5
- Odds in favour of rolling a 3 = 1 : 5