These guided workshops have been designed to provide the tools and materials to plan and host parent education sessions. Each workshop is self-contained and includes a template for sharing practical, age-specific strategies and resources to encourage mathematics learning at home. The materials for each module include an invitation letter and flyer, an annotated agenda, and Blackline (photocopy) masters for all activities (including solutions).

These workshops have been created to complement each of the five modules in the *Inspiring Your Child to Learn and Love Math Tool Kit*. The workshops require no prior knowledge of mathematics or specialized content—they can be implemented by anyone who has an interest in learning and sharing.

*We have made every effort to acknowledge original sources and to comply with copyright law. If there are cases where this has not been done, please notify the author. Errors or omissions will be corrected in a future edition.*
Module Four

Junior (Grades 4, 5, and 6)

Counting Ahead
**Welcome**

Warmly welcome parents, guardians, and caregivers as they arrive at the door.

Introduce yourself and briefly explain your role in the workshop.

Invite parents to help themselves to coffee and to explore the math resources, books, and games on the resource table.

**Purpose**

Explain that the purpose of this workshop is to:

- Prepare parents for the changes they might see in their child’s math studies when children move from primary to junior division.

- Help parents understand some of the ways that math is being taught in today’s classrooms and how they might be different from when parents were in school.

- Give parents advice on how to help with problem-solving and math communication.

- Address questions and concerns.

**Introduction**

Welcome parents and thank them for taking the time to come.

Thank organizers and other key members of the implementation team.

Introduce parents to the C.O.D.E. “Inspiring Your Child to Learn and Love Math” and tell them how to get a copy.

You can ask school librarians and math resource teachers to help you find school materials to display at these workshops (math books, games, manipulative materials, etc.).
6:15–6:30 p.m.

**Icebreaker—“Broken Calculator”**

* Introduce parents to the game “Broken Calculator.”

* Explain that one of the most important math concepts taught in the junior division is how to use problem-solving strategies (involving numbers, operations, and place value) to solve number problems.

* The object of the game is to create number sentences, or number equations, without using specific keys on the calculator. Players pretend that one or more keys on the calculator are broken. They then try to do equations without using those particular keys:
  * Ask parents to sit with a partner.
  * Give a calculator to each pair of partners.
  * Explain that “Bob” spilled coffee on these calculators, so most of the buttons don’t work.

* Luckily, the “4” key and the basic operations keys (+, -, x, ÷, =) still work.

* Using only the buttons that still work, create equations that will produce the numbers “1” to “20.”

* Press the “=” key after each step. This will always produce correct results, and it eliminates the need for partial solutions. Sample answers:
  
  \[
  4 \div 4 = 1 \\
  (4 + 4) \div 4 = 2 \\
  (4 + 4 + 4) \div 4 = 3 \\
  (4 \times 4) + 4 \div 4 = 5 
  \]
6:30–6:45 p.m.

Activity 1—“SKUNK” probability game

* Explain that this is a game of probability.

* Divide parents into groups of four or five people. Give “Skunk Cards,” pencils, and dice to each group.

* Each game has five rounds—one round for each letter of the word “SKUNK.” For example, in round one (“S”), each player takes a turn rolling the dice. Each player rolls again in round two (“K”), in round three (“U”), and so on.

* After rolling the dice, the first player adds the numbers on the dice and records the total. For example, if a player rolls a “7” in round “S,” that player writes “7” under the “S” column on their own “SKUNK Card.” If a player rolls a “5” in round “K,” the player writes “5” under the “K” column, and so on.

* After rolling the dice and recording the score, the player can choose to either:
  * End their turn voluntarily and pass the dice to the next player,
  * Keep rolling the dice in order to earn more points.

* If the player chooses to roll again, their turn continues until they:
  * End their turn voluntarily and passes the dice to the next player.
  * Roll a single “1.”

Note: For this game you need copies of “Skunk Cards,” pencils, and dice for each participant.
Activity 2—The game of “NIM”

* Give a NIM game board to each parent.
* Ask parents to choose partners.
* Explain that NIM is a game of logic and strategy. It is easy to play with children at home for free.
* Two players can play with game pieces arranged in rows. You can use beads, buttons, toothpicks, etc. To play the game, players take turns marking (if playing on a board) or removing (if playing with game pieces) a certain number of game pieces from each row. For example, players might decide that they are allowed to remove one, two, or three game pieces per turn. A player may not remove the same number of game pieces that the last player removed during the previous turn.

**SKUNK** discussion

* Invite parents to share what they learned about math from this game. What did they learn about probability? (Hint: the probability of rolling a single “1” is one in six and the probability of rolling two “1”s is much less—1 in 36).
* Ask parents to share the strategies they used to play this game.
* Ask parents to think of other examples of probability in daily life (such as flipping a coin) and then calculate the probability involved.
In the junior grades, there is more emphasis on students:

- Applying facts, rules, and procedures.
- Using problem-solving strategies to solve math problems.
- Communicating.
- Explaining “math thinking” and their understanding of concepts.

**Case studies**

After watching the video, distribute the “Case Studies” handout.

Read each case study aloud.

Give parents time to think about each case study before having a group discussion.

**“NIM” discussion**

Ask parents to share what they learned about math from this game.

Ask parents to think about strategy. Is the game fair no matter who goes first or second? Would their strategy change if they could select a different number of game pieces?

**Video “Inspiring Your Child to Learn and Love Math”**

Introduce the video. Explain that the video focuses on how students learn math in the junior grades and how the approach is different than that of earlier grades.

Note: As parents watch the video, invite them to record their thoughts on the Reflection Sheet provided. Allow time for discussion after the video.

* The object of NIM is to be the player who marks or removes the last of the game pieces on the game board. The player who marks or removes the last game piece wins!
7:30–7:45 p.m.

Activity 3: Fair or unfair—a probability challenge

It is important for children to understand the topic of probability because probability—the chances of something happening or not happening—is part of our daily lives. Understanding probability means understanding weather reports, the chances of winning the lottery, and even batting averages in baseball.

Making a fraction spinner

This activity uses a visual tool that is easy and inexpensive to make at home.

Ask parents to choose two paper plates of two different colours.

Cut each plate from one edge to the centre.

Insert one plate into the other through the cuts so that the two plates overlap.

Rotate the plates and experiment with different fractions (½ red, ½ blue; ¾ red, ¼ blue, etc.).
Engage parents in a conversation about chances that are fair and chances that are unfair. What does it mean for something to be fair? Ask for examples of games that would be fair. (Hint: flipping a coin, rolling a die, etc.).

Distribute the probability worksheet called “Activity 3: Spinner Activity” (from Photocopy Masters). 

Ask parents to look at the spinners and decide if they are fair or unfair, based on the fractional parts or the distribution of letters and numbers in the fractional parts. Parents should indicate their answers by putting checkmarks in the worksheet boxes.

Ask parents to predict the probability of the spinner landing on each of the fractional parts. Hint: for spinner #1 the probability of landing on the “1” is 1 out of 4. For spinner #2, the probability of landing on the “2” is 1 out of 6. For spinner #3, the probability of landing on the “5” is 4 out of 12.

* Place a pencil and paperclip in the centre of the connected plates.

* Ask parents to spin the paperclip and give the probability of the paperclip landing on one specific colour.

* Are the chances equal? The answers will vary depending on the coloured fractions in each plate.

* Ask parents to predict the probability of the spinner landing on each of the fractional parts. Hint: for spinner #1 the probability of landing on the “1” is 1 out of 4. For spinner #2, the probability of landing on the “2” is 1 out of 6. For spinner #3, the probability of landing on the “5” is 4 out of 12.
If time allows, ask parents to create fictional scenarios for each spinner. Think of situations that might occur at home, too. Read the following sample scenario aloud:

* The Smith family wants to plan a family outing for the next Professional Activity Day, but can’t decide where to go. The family members discuss options and agree on four ideas: go to the park, go to the beach, go for a bike ride, or go for a nature hike. They decide to use a spinner to make the decision. Which spinner would they use? Is this a fair way to make the decision? Why or why not?

**Wrap Up**

* Ask parents if they have any further questions about the workshop information or suggestions for future workshops.
* Tell parents you will be available after the workshop if they have additional questions.
* Thank parents and attendees for coming and ask them to complete an evaluation form.
* Distribute fact sheets to parents before they go home.

**Recommended Resources**

* Direct parents to the list of additional resources (including math books, songs, websites, apps, television shows, and games).
Recommended Resources

There is a wealth of information on the internet in addition to the links and other resources listed below. For an up-to-date list, please check our website!

These resources remind us that:

- Math takes practice.
- Mistakes are part of learning.
- Asking, not telling, is most helpful to children’s learning.
- Math is everywhere!

They also remind us to have fun doing math together!

Math support

Mathies, a website designed for Ontario K–12 students and parents.
mathies.ca

Online games and apps

MathFrog—MATHematics Fun Resources and Online Games—is an excellent website with free resources for grades 4, 5, and 6 students and their parents. The activities address all strands in the elementary mathematics curriculum (English and French).
cemc2.math.uwaterloo.ca/mathfrog/

Big Wig Sub Shop. Kids learn how to add and subtract with number combinations.
tvokids.com/games/bigwigsubshop

Tumbletown Shop Around. This site helps children learn about financial literacy.
tvokids.com/games/tumbletownshoparound

Flower Frenzy. Children learn about patterning and algebra.
tvokids.com/games/flowerfrenzy

Triangle Alley. Kids learn about geometry and spatial sense.
tvokids.com/games/trianglealley
What are the Chances? Children experiment with spinners and dice.
tvokids.com/videos/whatarechances

Math Castle. Computational practice app.
tvokids.com/apps/mathcastle

Tumbleweed’s Yard Sale. Making change app.
tvokids.com/apps/tumbleweedsyardsale

*The Prime Radicals* Pentomino app.
tvokids.com/apps/primeradicalspentominos

**Closing gaps**

Interactive online activities help students practice concepts and skills. This release focuses on representing fractions for the junior and intermediate divisions.

ePractice
edugains.ca/newsite/math/assessmentfor_as_of/assessment_gap.html

This resource, designed for teachers, might help parents or peer tutors to help students with fractions.
edugains.ca/resources/LearningMaterials/GapClosing/Grade6/GCU1_FG_RepresentingFractions.pdf

**Enrichment**

Problem of the Week (for grades 5 and 6). You can sign up for emails that contain weekly math problems.
cemc.math.uwaterloo.ca/resources/potw.php
Books

Math fun

Mathemagic!: Number Tricks, Lynda Colgan

What’s Faster than a Speeding Cheetah?, Robert E. Wells

Is a Blue Whale the Biggest Thing There Is?, Robert E. Wells

Counting on Frank, Rod Clement

The Math Curse, Jon Scieszka and Lane Smith

Computation

The Rajah’s Rice, David Barry and Donna Perrone

Anno’s Magic Seeds, Mitsumasa Anno

A Drop of Water: A Book of Science and Wonder, Walter Wick

Great Estimations, Bruce Goldstone

Probability

Socrates and the Three Little Pigs, Tuyosi Mori

Do You Wanna Bet? Your Chance to Find Out About Probability, Jean Cushman

Anno’s Hat Tricks, Akihiro Nozaki

Geometry

The Librarian Who Measured the Earth, Kathryn Lasky

What’s Your Angle, Pythagoras?, Julie Ellis

Data Management

How to Lie with Statistics, Darryl Huff
Junior Division Case Studies Handout

Module Four—Counting Ahead

Here are some common scenarios for you to think about and discuss. For each case, imagine that you are facing the situation presented, then discuss your observations with the rest of your small group. How would you react? Why? After all cases have been discussed, solutions will be presented to the group as a whole. The solutions should inform the discussion and provide specific helpful strategies for parents.

Case Study One
You wonder if your child knows basic number facts as well as you did when you were in grade 5. When you ask your child to multiply 7 x 9, you think they are too slow. Should you be concerned?

Case Study Two
Your child expresses exasperation with having to “estimate their answer” before calculating it. They say it is a waste of time because it’s the actual answer that really matters. How do you explain that estimation does matter and is an important skill?

Case Study Three
Your child closes the book and says “All done!” When you ask if they have checked their work, they reply “Isn’t that the teacher’s job?” Your child complains about having to do every math problem twice. What do you say?

Case Study Four
Your child asks you to check subtraction, multiplication, and division questions. You are shocked to see what your child has written on the page. How could arithmetic look so strange?
Case Study One Solution

Memorizing the times tables is like singing your “ABCs”: memorizing the tune is not the same as being able to recognize, write, pronounce, or read the letters. Similarly, being able to recite “4 x 3 = 12” does not mean that a child understands what “4 x 3 = 12” means.

“Basic fact” knowledge is the ability to have fast and fluent recall of key addition/subtraction facts, multiplication/division facts, and proportional relationships.

Creating high pressure situations related to learning math (e.g. chanting, flash cards, timed tests, “Mad Minutes”) could result in math anxiety. Such activities do not contribute to understanding. Shuffling flash cards and asking for rapid responses to random questions do not contribute positively to learning because these activities do not help our brains learn to remember more quickly. It is easier to remember a fact when our mind can link that fact to something it already knows. This is the idea behind rhymes such as “five, six, seven, eight—fifty-six is seven times eight!”

We want children to learn and understand the patterns in math and not just recite math. Automatic recall of basic facts is important—be sure to practice basic facts at least three times per week—but it is important to remember that other skills are equally important.

Here are strategies that can help children learn math facts:

**Skip Counting** is perhaps the simplest strategy that children can master. Skip counting means counting by 2s, 5s, 10s, etc. It is fun to do and it helps children begin to hear patterns in numbers. When paired with a chart, they can even begin to see those patterns.
For example, when skip counting by 10s, see if your child notices the pattern that all numbers end in zero.

Count by...

Make **10** is another strategy. It is useful for children to think about numbers in relationship to “10,” which can serve as a mental anchor for them.

For example, when children learn the math fact “14 - 6 = 8,” they don’t need to subtract the “6” all at once. Instead, they can take away “4” from 14 first, to make 10, and then take away “2” more from 10, which equals “8” (because 6 = 4 + 2).
By the start of junior division, children should know about “doubles” (e.g. $6 + 6 = 12$; $9 + 9 = 18$). A good strategy for adding “$7 + 8$” is to think of “$8 + 7$” as a double $(7 + 7) + 1$. When students are good at using this strategy, they can learn to recall sets of facts through games and other creative practice activities that encourage accuracy and speed.

The number “9” is often intimidating for children in junior division, at least until they are reminded that multiplying by “10” is easy. Understanding that “9” is very close to “10” can make working out “9 facts” in your head more straightforward.

For example, if a child knows that “$10 \times 7 = 70$,” then they can take away one “7” from “70” to figure out that “$9 \times 7 = 63$.”

Fact families are important learning tools. It is helpful to learn basic facts as part of “fact families.”

For example, children are taught that addition facts are connected to subtraction facts, and multiplication facts are connected to division facts. An addition and subtraction fact family might include “$7 + 8 = 15$” as well as “$15 - 8 = 7$.” Using this approach cuts the number of math facts to learn in half.

- It is important for children to know that “$30 \times 3 = 90$” because they know that “$3 \times 3 = 9$.” Similarly, it is important to know that “$80 \times 4 = 320$” because “$8 \times 4 = 32$,” and “$70 \times 7 = 490$” because “$7 \times 7 = 49$.”

- Keep track of which facts a child knows by creating a set of cards with one basic fact per card. Separate the cards into two piles: facts the child can recall instantly and facts that the child cannot recall yet. Each day, give the child a new card from the “don’t know” pile. Once that fact is “known,” move the card into the “known” pile. Seeing the “known” pile get larger is motivating!
Junior Division Case Studies Handout

Case Study Solutions

Case Study Two Solution

Consider the following scenarios that use estimating:

• You say to your child “Imagine that you want to buy five magazines that cost $3.95 each. At the cash register, the clerk says they will cost $23.75. Is that right?” Your child says “Five at $3.95 each is about five times 4, or about $20.00, so $23.75 seems too much. I’d ask the clerk to check the total.” You congratulate your child by saying “You just estimated!”

• You say “Remember when you wanted to plant a row of carrots last summer? You measured the length of the row: 58.3 cm. What did we do next?” Your child replies “Now I remember. You said the plants should be 6 cm apart, so when we went to the nursery I bought 10 plants.” You ask your child “Why 10?” and your child replies “58.3 is nearly 60, and 60 divided by 6 is 10, so we figured that 10 plants should be enough.” You congratulate your child by saying “You just estimated!”

• You ask your child “Are calculators always right?” Your child says “I know you want me to say no. But calculators should always be right!” You ask your child to give YOU a homework multiplication problem to do. They give you “107 x 56.” You enter numbers into a calculator, then say “The answer is 952, but how do you know I’m right?” Encourage your child to think through the answer: “107 times 56 is a bit more than 100 times 50, which is 5000. That isn’t even close to 952.” You confess that you entered “17” instead of “107” and left out the zero on purpose. This makes the point that, without estimating first, you can make a really big mistake.

An important lesson that students don’t always learn is that math makes sense. Math is NOT just a confusing series of steps and procedures. The process of creating an estimation, rather than a guess, can help math make sense.
Junior Division Case Studies Handout

Case Study Two Solution Cont’d

For example, here is an efficient way to think about adding 298 and 403: 298 is almost 300 (this shows that the child understands the magnitude/place value of the number), and 403 is just a little more than 400. 300 plus 400 is 700, so 700 would be a good estimate. If the child estimated in advance, they can be fairly sure that they are correct when calculating that 701 is the final number.

Children often want to use a calculator to “check” their answers. Although we know that calculators are useful for finding answers quickly, they are not perfect. It is easy to make mistakes when entering numerical values, especially in long problems. Estimating the solution first helps a child determine if the calculator’s answer is reasonable.

Another word for estimation is “approximation.” We use approximation in real life all the time—to estimate the amount of paint needed to cover a house, a wise approximation overestimates the amount of paint required to make sure that there will be enough paint to do the job.

Case Study Three Solution

It is amazing how easy it is to make mistakes when doing calculations. This makes it extra important to check all answers to be sure they make sense. You have to work carefully and check your work in every subject. It is called "proofreading" in English and “debugging” in computer science. Checking your work is also an important part of learning. Yes, students learn what they did wrong when they get homework back from the teacher. But they will learn the math much better if they make sure answers are correct before they turn in the homework.

Although it is important to check your work, "going over your work" is the worst way to do it. "Going over your work" means reviewing the steps you just did to see if they look right. The drawback of this method is that you are likely to make the same mistakes again! You are more likely to catch errors if you check your work with a method that is different from your original computation. By using a different method, the only way an error can go undetected is in the unlikely situation that you make two different errors that somehow manage to cancel each other out.

If you find that you have made an error, it is important to try to discover what that error was. You might be making the same error over and over. As soon as you identify the error, you might be better able to watch for it in the future.
Case Study Four Solution

We are often tempted to jump right in and show children “our way” of doing calculations because we believe our methods are faster and simpler. At this stage of our children’s math journeys, however, “our way” might be too advanced.

One significant barrier to learning math is the failure to grasp the notion of place value and the meaning of numbers. Annotations are provided below, next to each solution, to show the process that children are taught to reinforce place value. Other, more efficient, methods (perhaps like yours) are introduced when children are competent and confident in using these introductory methods.

\[
563 - 248 =
\]

\[
\begin{align*}
500 + 60 + 3 & \\
- 200 + 40 + 8 & \\
500 + 50 + 13 & \\
- 200 + 40 + 8 & \\
300 + 10 + 5 & \\
563 - 248 = 315
\end{align*}
\]

First, I wrote out the numbers to show their parts: hundreds, tens, and ones.

Then I subtracted from right to left to find the differences.

To find the final answer, I added the hundreds, tens, and ones to make one number.

\[
14 \times 33
\]

\[
\begin{array}{|c|c|}
\hline
10 & 30 & 330 \\
4 & 12 & 132 \\
\hline
& & 462 \\
\end{array}
\]

I used a grid to organize my numbers, and I separated the tens and ones.

I filled in the boxes in the grid, then added the rows and totalled the columns. I could have added the columns and totalled the rows, too. You would get the same answer.
First, I wrote out the seven times table to make a fact box.

Then I used the information in the fact box (and what I know about multiplying by 10) to help me figure out the divisors.

Are these solutions correct?

\[
\begin{align*}
500 + 100 &= 600 \\
60 + 90 &= 150 \\
7 + 9 &= 16 \\
600 + 150 + 16 &= 766
\end{align*}
\]

We partition 815 into 800 and 10 and 5 and put it in a table.

We partition 34 and 30 and 4 and put it in the table.
### SKUNK Score Sheet

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### SKUNK Score Sheet

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*Inspiring Your Child to Learn and Love Math*  
*Implementation Guide / Module Four*  
76
Game of NIM Game Board

Game 1

Game 2

Game 3
### Activity 3: Spinner Activity

<table>
<thead>
<tr>
<th></th>
<th>Fair or Unfair</th>
<th>Probability</th>
<th>Scenario</th>
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<tr>
<td>1</td>
<td><img src="image1.png" alt="Spinner 1" /></td>
<td>1 2 3 4 5</td>
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<td>2</td>
<td><img src="image2.png" alt="Spinner 2" /></td>
<td>1 2 3 4 5 6</td>
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<td>3</td>
<td><img src="image3.png" alt="Spinner 3" /></td>
<td>1 2 3 4</td>
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<td>4</td>
<td><img src="image4.png" alt="Spinner 4" /></td>
<td>A B C</td>
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Discussion about spinners

Which spinners are fair? Explain your answer.

__________________________________________

__________________________________________

__________________________________________

Which spinners are unfair? Explain your answer.

__________________________________________

__________________________________________

__________________________________________

How could you use spinners at home? Think of a way to use a spinner at home to help your child understand the concept of probability.

__________________________________________

__________________________________________

__________________________________________

Answers to spinner questions:

1. Spinner #1 and spinner #2 are fair because they are divided into equal parts. You have an equal chance of landing on each part.

2. Spinner #3 is unfair because there is one “3”, two “2”s, three “1”s, two “4”s, and four “5”s, so there is a greater probability of landing on a “5” than any other number.

3. Spinner #4 is unfair because it is not divided into equal fractional parts. There is a greater chance of landing on section C than on section A or section B.
Recommended Resources

There is a wealth of information on the internet in addition to the links and other resources listed below. For an up-to-date list, please check our website.

Math support

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Enrichment

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Online games and apps

MathFrog—MATH Fun Resources and Online Games (in English and French) Free activities for grade 4, 5, and 6 students and their parents. cemc2.math.uwaterloo.ca/mathfrog

Tumbletown Shop Around. This site helps children learn about financial literacy. tvokids.com/games/tumbletownshoparound

What are the Chances? Children experiment with spinners and dice. tvokids.com/videos/whatarechances

The Prime Radicals Pentomino App. tvokids.com/apps/primeradicalspentominos

Iluminations: Resources for teaching math. illuminations.nctm.org

Books

Mathemagic: Number Tricks, Lynda Colgan
Counting on Frank, Rod Clement
The Math Curse, Jon Scieszka and Lane Smith
What's Faster than a Speeding Cheetah? Robert E. Wells

Supporting your junior learner at home

• It is important for both you and your child to have an open mind and a positive attitude about math.
• Remember that children use their emotions to tell them what is important to learn and remember. Positive emotions inspire us to pay attention. Negative emotions (such as frustration, fear, and anxiety) “turn off” the brain’s switch for learning.
• Be a coach. Praise your child’s efforts. Encourage your child to learn from mistakes. Celebrate correct solutions and encourage your child to take new risks.
• Talk math. Ask your child to explain what they have learned. Ask them to show you how to do a math problem.
• Encourage your child to double-check their work.
• Teach your child how to show you how to do a math problem.
• Correct solutions and encourage your child to take new risks.
• Be a coach. Praise your child’s efforts. Encourage positive emotions (such as interest and excitement) and redirect negative emotions (such as frustration) to keep children engaged.
• Remember that children use math to make decisions in real and meaningful situations. Remember that children use math to make decisions in real and meaningful situations.
• It is important for both you and your child to have an open mind and a positive attitude about math.
Handy math facts for the junior division

Characteristics of children in junior division

Children in junior division tend to be:
• Independent. They do not want to be treated like a child.
• Developing interests and hobbies.
• Social.
• Competitive.
• Comparing themselves to their peers in terms of appearance, achievement, and friends.
• Self-conscious about their academic, social, and athletic abilities.
• Likely to be physically animated and restless.

Most children in junior division enjoy:
• Learning.
• Talking.
• Contemplating abstract concepts and ideas. They have a good attention span.
• Teasing and testing boundaries. They have a sense of humour that often escapes adults around them.

Math milestones for children in junior division

It is important to remember that not all children learn the same way or on the same day. Milestones, or learning expectations, are meant to broadly describe what your child should know, based on the curriculum, by the end of junior division.

Always remember to talk to your child’s teacher or teaching team (including educational assistants, special resource teachers, and the school principal) if you have any concerns about your child’s development.

By the end of grade 6, your child should be able to:
• Add and subtract decimal amounts to thousandths.
• Multiply and divide four-digit and two-digit whole numbers by two-digit whole numbers.
• Multiply and divide fractions.
• Calculate rates, ratios, and proportions.
• Explain the relationship between simple fractions, decimals, and percentages.
• Convert large metric units to small metric units (for example, metres to centimetres).
• Develop and apply geometric formulas to find perimeter, area, and volume.
• Predict the frequency of an outcome in a probability game (such as rolling dice) by calculating and using the theoretical probability of that outcome.

Parents and caregivers are not expected to be math experts. It will never be your responsibility to teach a specific math lesson. But you can help your child to stay motivated and develop a positive attitude!