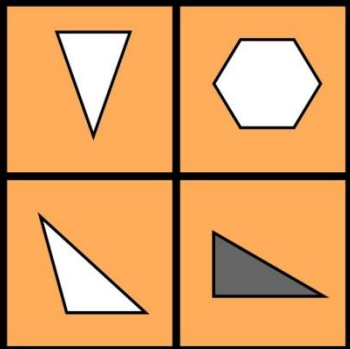| Types of Questions	Selecting Tools and Strategies	Representing	Connecting	Problem Solving	Reflecting	Communicating	Reasoning and Proving
Primary	**Procedural Thinking** How can 3 children share 12 cookies fairly? (Small)	**Representative Thinking** Show 10 using ten frame. **Representative Thinking** Show the number 7 in as many different ways as you can. (Small) **Representative Thinking** There are 23 students standing in line. Jack is the middle. How many people are ahead of him?	**Conceptual Thinking** The answer is 5. What is the question? (Small) **Conceptual Thinking/ Structural Thinking** How are these triangles different and alike? (Small) **Connective Thinking** Draw two pictures of this box (rectangular prism) that look different. (Small)	**Procedural Thinking** How many different products are possible when you multiply the numbers on two die? (Small) **Procedural Thinking / Structural Thinking** Meg has 3 pennies and I have 15. How many pennies so I have for each of Meg's?	**Structural Thinking** Is it easier to skip count by 2, 5 or 10? You want to skip count to 21. What is the best number by which you can skip count?	**Communicative Thinking** Create a pattern picture. Describe the picture to your friend so that he/she can make the same picture without looking at your picture. **Communicative Thinking** Jinny would like to measure her teddy bear. Is it easier to measure it with pencils or paper clips? **Conceptual Thinking** To multiply 8 x 5, Chris think "4 x 10." Explain his thinking **Connective Thinking** Describe 100 thousand in as many ways as you can.	**Communicative Thinking** John says "5+3 = 9." Is he right? Show your thinking
Junior	**Procedural Thinking** Mandeep had 6 coins worth 47 cents. How many are nickels? (Small) **Constraint Thinking** Use the clues to figure out the number: -it is greater than 500 -it can be modelled with 13 base ten blocks -it is less than 800 -the hundred digits is 3 more than the tens digit -the ones digit is greater than 5 (Small) **Procedural Thinking** Number Talks - 55 + 78	**Representative Thinking** How do you know that $3\frac{1}{3} = \frac{10}{3}$? (Small) **Procedural Thinking** Use a math tool to show this math expression" 356 + 845.	**Connective Thinking** There are 28 fish, with 7 fish in each fish bowl. What is the fraction of fish in each bowl? $(2 \times 6) + (2 \times 3) = 2 \times 9$ $(3 \times 5) + (3 \times 2) = 3 \times 7$ **Communicative Thinking** I have four sides. I have one pair of parallel sides. I have one pair of opposite sides that are equal in length. Who am I? This shape is a _____. **Connective Thinking** What is an non example of a rectangle?	**Procedural Thinking/ Conceptual Thinking** Mr. Frank baked some cookies. He gave all the cookies to 4 friends. How many cookies did he bake? **Conceptual Thinking / Connective Thinking** A shape is made up of two rectangles. The area of the full shape is 50 square centimetres. What might the side lengths of the two rectangles be? What might full shape look like?	**Structural Thinking** What number do you find easiest to multiply by? (Small) **Communicative/Connective Thinking** Describe what multiplication is all about. (Small) **Conceptual Thinking** Sarah says she knows that $\frac{1}{2}$ of 8 = 4 and $8 \div 2 = 4$. She is now wondering whether this relationship is always true. Is taking $\frac{1}{2}$ of a number the same as dividing that number by 2? (Norris and Schuhl)	**Procedural Thinking** How would you calculate 74 + 69? **Conceptual Thinking** Jennifer is 5,000 days old. Describe her way in a way that is more understandable.	**Conceptual Thinking** Which One Doesn't Belong?

Intermediate	**Procedural Thinking** Hasnain is buying 24 oranges. Two stores offer the following deals:
	
	    Store A: 12 oranges for $6.48
	    Store B: 5 oranges for $2.65
	
	Hasnain can buy oranges individually.
	
	How much will Hasnain save if
		Procedural Thinking Show -7 on a number line or with integer tiles.
		
		Conceptual Thinking/ Connective Thinking Draw the following patterns. Write the algebraic expression for each pattern. Without drawing a graph, describe how the graph will look like (i.e. type of line, points that the line would pass through, etc.)
			Constraint Thinking / Connective Thinking / Conceptual Thinking / Procedural Thinking A triangle and a rectangle have the same base and area. The rectangle has an area of 24 ☐ ☐². What is the height of the triangle?
			
			Conceptual Thinking What is the equation of the line with a point of (4, 3)? List at
				Procedural Thinking The regular price of Call of Duty is $59.99 but it is on sale at 20% off at a local gaming store with no taxes. Best Buy has the same game for 33% off; however, you must pay the taxes. Which store is cheaper? Explain your thinking.
				
				Conceptual Thinking/ Connective Thinking
					Communicative/ Connective Thinking Why is it helpful to understand factors?
					
					Connective Thinking Choose a 3D shape. Describe all the possible cross-sections you could create.
						Procedural/ Conceptual Thinking The mean of a set of numbers is 32. What might the numbers be?	**Conceptual Thinking** The sum of two negative integers can never be positive. Yes or No? Why?
							
							Conceptual Thinking A pizza store makes two sizes of pizzas shaped as rectangles. The large pizza is twice as long and twice as wide as the small pizza. Fadia ate $\frac{3}{4}$ of a small pizza and Lori ate $\frac{3}{16}$ of a large pizza. Fadia

he buys 24 oranges at Store B?
 	
Procedural Thinking
Are you positive?
Indicate which problems result in a POSITIVE answer:
   A. -(-53 + 92)
   B. -34-29
   C. 93 -(23)
   D. -5/-2
   E. (-5)(-8)
Describe the process that you used to decide where the problem resulted in a positive answer (Rose et al.)
	a. 8, 11, 14, 17, …
	b. 13, 11, 9, 7, …
	c. 0, 1, 4, 9, …
	
	Conceptual Thinking / Procedural Thinking
	Show -7 as a sum of a positive and negative number
		least two possibilities.
		
		Conceptual Thinking
		You know how much one-half of John's money is and how much one-fourth of Ned's money is . How can you find out how much they both have together?
		
		Representative Thinking /Conceptual Thinking
		You buy a jacket at 40% off. You buy shoes at 20% off. You pay the same amount for both items. What is do you know about the relationship between the two pre sale prices?
			A shape is completely in the first quadrant. After a translation, where could it be?
			
			Procedural Thinking / Conceptual Thinking Latoya can make one and a half 6 apples and 3 pears. She wants make 4 pies. How many apples and pears will she need?
					says she ate more pizza because $\frac{3}{4}$ is greater than $\frac{3}{16}$. Is she correct? Explain your reasoning.
					
					Conceptual Thinking
					Show two graphs - plot one (x, y) and plot the other one (y,x). Which one is correct?
					
					Procedural Thinking / Conceptual Thinking
					A store employee noticed that an item's price had been reduced by 30% and realized it was a mistake. So she added 30% back to the reduced price. Avery said that price is the same as it used to be but Zahra disagreed. With whom do you agree. Why?