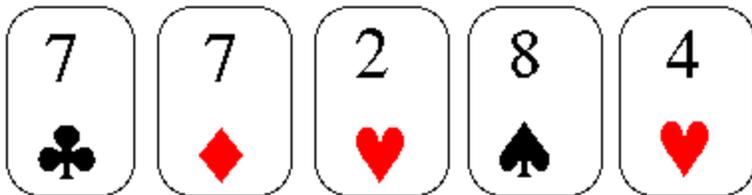# PMC MATH SCAVENGER HUNT 2/23

Logic Puzzles - Parth

1. "The day before yesterday I was only 25 and next year I will turn 28." What day is my birthday?

2. You have to try to find out which card I am thinking of. Here are some clues:
   i) The value of my card is a prime number.
   ii) The values of my two neighbours add up to a multiple of 3.
   iii) My card is next to a card which is next to the 2 of hearts.

3. Tom asked his Granny how old she was. Rather than giving him a straight answer, she replied: "I have 6 children, and there are 4 years between each one and the next. I had my first child (your Uncle Peter) when I was 19. Now the youngest one (Your Auntie Jane) is 19 herself. That's all I'm telling you!" How old is Tom's Granny?

4. This box is a Magic Square. This means that the numbers add up to the same total in every direction. Every row, column and diagonal adds up to 111. But there are some numbers missing! Fill in the missing numbers. They are all different.

5. I have a broken phone that consists of 10 digits and two symbols, [#] and [*], as shown in the illustration below. On the phone's screen is a small program which shows the same keyboard, but with the buttons in a different order. When you press a button on the keyboard, then the respective button on the same place on the screen is highlighted. That is: button [1] on the keyboard highlights button [6] on the screen; button [2] on the keyboard highlights button [7] on the screen; and so on. The object is to press consecutively some 5 buttons on the keyboard so that the same set of buttons is highlighted on the screen.

6. If one and a half hens lay one and a half eggs in one and a half days, how many eggs does one hen lay in one day?

7. Two friends have a nice meal together, and the bill is $25. The friends pay $15 each, which the Waiter gives to the Cashier. The Cashier hands back $5 to the Waiter. The Waiter keeps $3 as a tip and hands back $1 each. So, the friends paid $14 each for the meal, for a total of $28. The Waiter has $3, and that makes $31. Where did the other dollar come from?
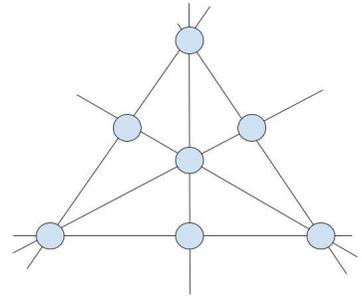
Math Riddles- Samantha

8. Find a 10-digit number where the first digit is how many zeros in the number, the second digit is how many 1s in the number etc. until the tenth digit which is how many 9s in the number. **Answer: 6210010000**

9. What three positive numbers give the same result when added together and multiplied? **Answer: 1, 2, 3**

10. How can you add eight 8's to get the number 1,000? (only use addition) **ANSWER: 888 + 88 + 8 + 8 + 8 = 1000**

11. A merchant can place 8 large boxes or 10 small boxes into a carton for shipping. In one shipment, he sent a total of 96 boxes. If there are more large boxes than small boxes, how many cartons did he ship? **ANSWER: 7 large boxes (7 x 8 = 56) and 4 small boxes (4 x 10 = 40) so 11 carton**

12. Can you arrange 7 trees so that there are 6 rows of 3 trees? It is entirely possible **ANSWER TO THE RIGHT -->**

Sudoku/Kakuro - Amber

24.

Puzzle 1 (4×4):

		2	
			3
1		3	
	4		

Puzzle 2 (4×4):

			1
	1	2	
	3	4	
4			

Puzzle 3 (4×4):

6×		2÷		2−
14+		24×		
				10×
8+				
10+			3−	

Puzzle 4 (4×4):

6+			2−
1−	6+		
		1−	4+
6+			

Puzzle 5 (5×5):

2−	2÷		1−	
	1	2−		9+
6×		4	3+	
3−	15×			
	9+		1−	

Puzzle 6 (6×6):

36×	189×	1−		2÷		240×	3−
		14+	56×		1−		1−
3+			24×		33+		24+
	36×						
540×	14+			13+		2÷	
		3÷		216×		4	22+
	40×	3÷			7−	8+	
56×			10×			6−	
	1−		9+			8−	

Puzzle 7 (6×6):

11+	2÷		20×	6×	
	3-			3÷	
240×		6×			
		6×	7+	30×	
6×					9+
8+			2÷		

Normal Riddles - Shawn

13. Which word in the dictionary is spelled incorrectly? **Incorrectly**

14. Two girls were born to the same mother, on the same day, at the same time, in the same month and year and yet they're not twins. How can this be? **There's another girl. Making them triplets**

15. The person who buys me doesn't need me, the person who makes me doesn't want me, and the person who uses me can't appreciate me.
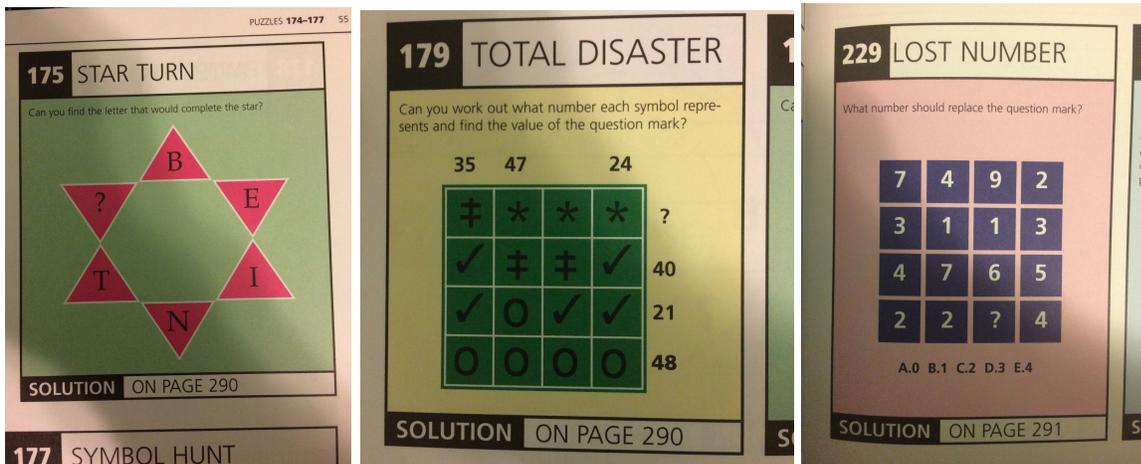What am I? **Coffin**

16. What is as light as a feather but even the world's strongest man couldn't hold it for a minute? **Breath**

17. A man was found dead in his study. He was slumped over his desk and a gun was in his hand. There was a cassette recorder on his desk. When the police entered the room and pressed the play button on the tape recorder they heard: "I can't go on. I have nothing to live for." Then there was the sound of a gunshot. How did the detective immediately know that the man had been murdered and it wasn't a suicide? **The cassette recorder needed to be rewinded**

18. You put me on a table and cut me, but you don't eat me. **Deck of cards**
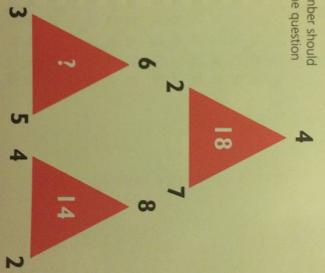
Tejasvi's Puzzle Book - Tejasvi

19
20
21
22
23
24

175 STAR TURN

Can you find the letter that would complete the star?

B
?   E
T   I
N

177 SYMBOL HUNT

179 TOTAL DISASTER

Can you work out what number each symbol represents and find the value of the question mark?

35   47   24

‡	*	*	*	?
✓	‡	‡	✓	40
✓	O	✓	✓	21
O	O	O	O	48

229 LOST NUMBER

What number should replace the question mark?

7	4	9	2
3	1	1	3
4	7	6	5
2	2	?	4

A.0 B.1 C.2 D.3 E.4

TRIANGULAR TEASER

What number should replace the question mark?

4

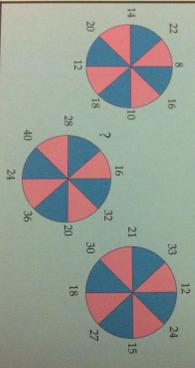6 2   18   7

3   5 4   8   14

?   2

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658 COMMON CENTS?

In her piggy bank, Jane has $5.24. The sum is made up of an equal number of four coins from 1¢, 5¢, 10¢, 25¢, 50¢ and $1. Which four coins does she have and how many of each of them?

1¢   5¢   25¢   50¢ $1   10¢

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316 NUMBER WHEELS

Can you work out which number should replace the question mark?

22 14 8 16
12 18 10
20 24 28

? 16
40 32
36 20 21

33 12 24
18 27 15
30

Haha hey guys it's Kllelly + Perchie (a match made in Hell)

25. Four teachers were born in different consecutive months. What is each teacher's birth month? (To be given an additional question worth one bonus point, tell either Kelly or Kriti a number that is neither prime nor composite.)

- Mr. Lomas was born before Mr. Kelly.
- Mr. Kelly was born two months after Mr. Melby.
- Mr. Melby was born after Mr. Jay but before Mr. Lomas.
- Mr. Jay was born in January.

Answer: Mr. Jay in January, Mr. Melby in February, Mr. Lomas in March, and Mr. Kelly in April.