

2017-2018 Puzzle Contests

Solutions for Contest #4



Grades K-5 Puzzle Solutions:

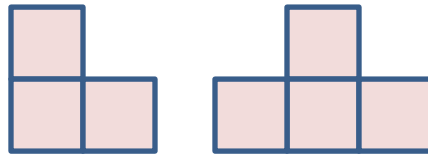
1. In the Math Crossword below fill in the blank cells with any numbers so that the horizontal and vertical equalities become true

1	+		+	3	=	6
+		+		+		+
3	+	5	-		=	
+		+		-		-
	-		+	6	=	9
=		=		=		=
9	-		+		=	1

Answer:

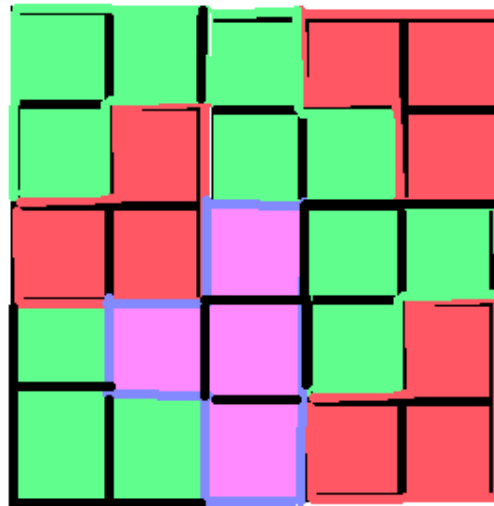
1	+	2	+	3	=	6
+		+		+		+
3	+	5	-	4	=	4
+		+		-		-
5	-	2	+	6	=	9
=		=		=		=
9	-	9	+	1	=	1

2. Can you make a 10 x 15 rectangle from the shapes below? You can use as many of each shape as needed.



Solution: One possible solution is below:

At first make the 5 x 5 square from the given shapes as shown below:



After that make the 2 by 3 rectangle form these 5 x 5 squares

3. Daniel, Andrew and Fyodor took part in the RSM-MetroWest chess tournament. Daniel and Andrew scored 15 points together, Daniel and Fyodor scored 12 points together, and Fyodor and Andrew scored 11 points together. How many points were scored by each contestant? (In a chess tournament, a player scores 1 for a win, 0 for a loss, and $\frac{1}{2}$ for a draw).

Answer: Daniel scored 8, Andrew scored 7, Fyodor scored 4.

Solution: If we add up all scores we note that on one hand it is 38. On the other hand, this is twice sum of scores for all three boys, i.e. three boys together scored 19 points and played 19 games. Then

- the points Fyodor got are $19 - 15 = 4$
- the points Andrew got are $19 - 12 = 7$
- the points Daniel got are $19 - 11 = 8$