2017-2018 Puzzle Contests

Solutions for Contest #2

Grades K-5 Puzzle Solutions:

1. From the picture and clues below, can you match each witch's name with her hometown and work out how long old is each one of them (it is known that they are 200, 300 and 500 years old)? **(30 points)**

A

B

C

1. Grizella is brewing a potion.
2. Gilda is 100 years older than the witch at position A.
3. Matilda is from Looneville.
4. The witch from Sceamsville is the oldest.
5. One of the witches is from Goblintown.

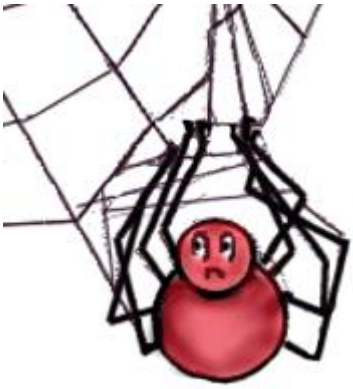
Position	Witch name	Hometown	Age
A			
B			
C			

Solution:

Grizella is at B (clue 1). Gilda is 300 years old and the witch at
A is 200 years old (clue 2), so Gilda is at C. By elimination, Matilda is in position A and she is from Looneville (clue 3). Grizella (at position B) must be 500, so she is the oldest, and she is from Screamersville (clue 4). By elimination, Gilda must be from Goblintown.

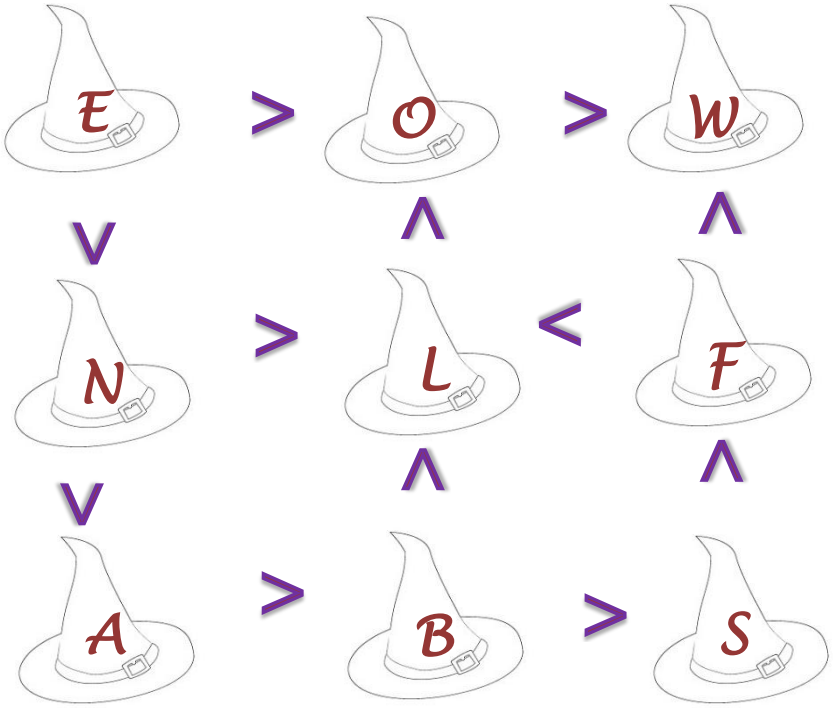
Position	Witch name	Hometown	Age
A	Matilda	Loonesville	200
B	Grizella	Screamersville	500
C	Gilda	Goblinstown	300

2. Right before Halloween, 25 young witches competed for making the best witch brew. Spiders are very important ingredients of a good witch brew, and so each witch was given a red, a black and a brown spider. However everyone knows that the brew is truly the best when it has three spiders of the same color in it. Could the witches exchange their spiders so that each of them has three of the same color ? Explain your answer. **(35 points)**



Answer: No, they could not. If it is possible then a number of the same color spiderss has to be a multiple of 3. But 25 is not divisible by 3.

3. Replace each letter in the diagram below by a digit from 1 to 9 to make all inequalities true (horizontal and vertical), and then arrange the letters in the order of increasing value of the digits. You will get the name of a plant used in a famous potion. **(35 points)**



Answer: ***WOLFSBANE***

123456789

Solution: The letter W must be assigned the smallest digit (see the signs of inequalities) the value of W is 1. Likewise E must be assigned the greatest value 9. The remaining steps follow the inequalities in a similar manner.