

Answers

for Grade 9 Group Assignments - Quarter #2

Notes:

- Answers for group assignment problems that are out of the workbook can be found in the “G9 Workbook Answer Key”.
- This answer key doesn't include all answers.

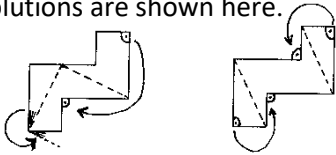
Week 9

1) 120 cookies

2) We can imagine that we could “unwind” the path he took, and we would get a right triangle where the base would be 168 (which is 7×24), and the height would be 70. The hypotenuse of this triangle is indeed the path he traveled, which turns out to be 182 feet.

3) Making a square

It is helpful here to realize that the area of the square must be 5, so the length of the side of the square must be $\sqrt{5}$. The question then becomes, “How can we make a line of length $\sqrt{5}$?” Well, this is the length of the hypotenuse of a right triangle that has legs of length 2 and 1. Two possible solutions are shown here.



Week 10

No answers needed

Week 11

Thursday's puzzle: The teacher subtracts 21 and then divides by 2.

Week 12

Thursday's puzzle #1: The area of this square is 100 times greater than the original square. Therefore, the time must be 100 times as much. The answer is 2000 minutes, or 1 day, 9 hours, 20 minutes.

Thursday's puzzle #2: There are 13 children in the family (4 girls and 9 boys).

Week 13

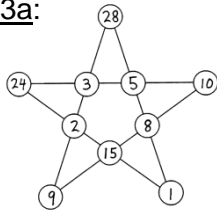
Puzzle: Mary and Larry contradict each other, so one of them must be telling the truth, and the other must be lying. Since we know that at least two are lying, then Jerry must be lying. So, Jerry stole the chocolate.

Week 14

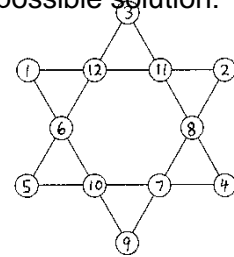
Puzzle #2: The key is to get the slowest people (Bob and Mary) to cross together and not have either of them cross back. Therefore, they cannot be the first pair across, and they cannot be the last pair across either (otherwise one of them would have had to bring the flashlight back across).

The solution is then as follows: Abe and Kate (the fastest people) cross first. Abe (but it could also be Kate) comes back across with the flashlight. Abe gives the flashlight to Bob and Mary who then cross over the bridge. They give the flashlight to Kate, who brings it back across the bridge. It all ends with Abe and Kate coming across together. The total time taken is 17 minutes.

Puzzle #3a:



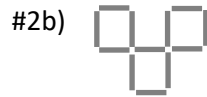
Puzzle #3b: one possible solution:



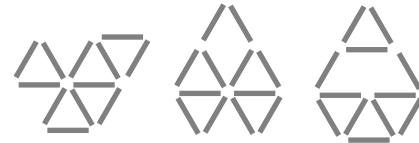
Week 15

#1) There are 20 squares, some of which are tilted.

#2a) The dark sticks are the ones that have been moved.



#2c) Here are three 3 solutions:



Week 16

Tuesday's Puzzle #1: I will show you this solution in next week's lecture.

Tuesday's Puzzle #2: $x = -2$ and $y = -15$