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Task: Maggie's Journey

Level: Primary, Third Grade

Strand: Algebraic relationships—understand patterns, relations, and functions

Core Math: Understanding of numerical relationships and how these relationships create predictable numerical patterns.

Area implemented: Introduction to mathematical patterns unit

Method: Small group work, 2 to 3 students each

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Maggie's Journeys

Maggie the inch worm lives at the top of a ten foot flag pole. She went to visit her aunt who lives at the bottom of the pole. It was a quick trip because Maggie was able to travel four feet a day as she went down the pole. Getting back up the pole to her house is much more difficult! Maggie can only climb three feet each day. At the end of the day she needs to rest and as she rests she slips back down the pole one foot!

1. How many days will it take Maggie to reach her home at the top of the pole?

2. How far up the pole would Maggie be after four days of traveling?

3. How long would it take Maggie to get home if the pole were eighteen feet tall?

4. How far up the pole would Maggie be after six days?

5. What if the pole were _____ feet tall? How long would it take Maggie to reach her home at the top of the pole then?

6. How far up the pole would Maggie be after _____ days of travel?

*Once you have finished working the problems in your group discuss your solutions with the teacher. After the teacher signs the line below your group may begin working on a poster that illustrates the solutions you all found.

I hereby certify that this group has displayed sound mathematical logic in their approach to this problem

Teacher's Signature: _____

Maggie's Journeys

Maggie the inch worm lives at the top of a ten foot flag pole. She went to visit her aunt who lives at the bottom of the pole. It was a quick trip because Maggie was able to travel four feet a day as she went down the pole. Getting back up the pole to her house is much more difficult! Maggie can only climb three feet each day. At the end of the day she needs to rest and as she rests she slips back down the pole one foot!

7. How many days will it take Maggie to reach her home at the top of the pole?
    It will take _____ days for Maggie to reach the top.

8. How far up the pole would Maggie be after four days of traveling?
    Maggie will be _____ feet up the pole after four days.

9. How long would it take Maggie to get home if the pole were eighteen feet tall?
    It will take _____ days for Maggie to reach the top.

10. How far up the pole would Maggie be after six days?
    Maggie will be _____ feet up the pole after six days.

ASK YOUR TEACHER TO FILL IN THE BLANKS BELOW!

11. What if the pole were _____ feet tall? How long would it take Maggie to reach her home at the top of the pole then? It would take Maggie _____ days.

12. How far up the pole would Maggie be after _____ days of travel? She would have traveled _____ feet up the pole.

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Poster Guidelines:

1. Choose the problem that you understood the best, or that you were most proud of your solution on. Which problem number did you choose? _____
2. Write the question for the problem you chose at the top of your poster.
3. Write the names of your group members at the bottom.
4. Show how you solved the problem by drawing, showing your work, using graphs, using charts, or using tables. Make sure that you are clear enough that even a kindergartener could understand how you found your answer!
5. Show another way to solve the problem. This should prove that your answer is correct!

A sample outline

3. How long would it take Maggie to get home if the pole were eighteen feet tall? It will take _____ days for Maggie to reach the top.
My approach and the solution I found (show your work)
Another way to solve the problem (show your work)
Mrs. Sheley And Company