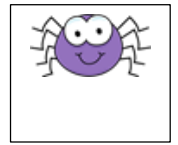# Spiders and Ants
Lesson Plan

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Fall 2015

The Task

A spider's web contains a certain number of spiders, which have eight legs, and their six-legged meal: ants. There are 64 legs in all, and four times as many ants as spiders. How many of each type of bug are there?

Materials	Facilitating Task
- The task - Pictures of a spiders and ants - Large Presentation Paper per group	- Begin by sharing pictures of a spiders and ants. - Read the problem together. Have students retell the problem in their own words. - Provide individual work time for students to begin finding possible solutions. - Form small groups (4 students maximum) to compare strategies and solutions. After reaching consensus as a group, record solution and justification on Presentation Paper. - Each group shares and justifies their solution to the class. - As groups share, the teacher asks questions to support students in connecting the strategies shared and the mathematical ideas highlighted.

Misconceptions	Suggested Prompts or Questions
• Students may confused by the constraints. Students may add spiders and ants before multiplying, added just the legs, or multiplied spiders times ants. • Students may solve the problem and not consider all constraints. • Students might reverse the relationship of spiders and ants ($4a=s$ or $4s=a$).	• How does your solution make sense to you? • How is your strategy similar to another strategy that someone used? • What do you know about the problem?