

## CENTIPEDE'S 100 SHOES

by  
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When Centipede stubs his toe, he decides he needs shoes. At the shoemaker's he asks for 100 shoes because he's a centipede and that means a hundred feet. Of course, when he goes to put them on, he has fifty-eight left over because centipedes really have only forty-two legs. His troubles increase as he laces up each shoe; it takes all day! Then he decides he needs socks because he's developing blisters. Finally he decides it's all too much work and that he will give his shoes and socks to his friends.

After reading the story, to transition to the activity, go back and read through the part which tells to whom he gave his shoes and socks. Discuss each type of animal and how many legs it has. Most of your children will be familiar with the animals other than woodlouse/lice, and may know how many legs each type has. But how can we find out how many legs a woodlouse/lice has?

**MATERIALS:** Chart paper, markers, individual work sheets, math journals

**ACTIVITY:** To refresh their memories, make a chart of each type of animal and its corresponding number of legs. Fill out the first two columns together: spiders - 8, beetles - 6, grasshopper - 6, woodlice - ?, worms - 1/0. Then have them complete the rest and figure out how many legs a woodlouse/lice has. You may wish to do this as a class or have them complete it independently. Have your students complete their individual charts on the attached "Centipede's Friends Get New Shoes and Socks" page. Remind them that Centipede started out with 100 shoes and 42 socks. This is a great idea for math journaling. Have them show how they reached their conclusions.

### **EXTENSIONS:**

1. Ask them if any other combination of the same animals would work. Have them show their work.
2. Bring in economic ethics -- did the shoemaker know Centipede only needed forty-two shoes? If so, why didn't he tell Centipede? And, what about Centipede's mother -- didn't she know?

**FYI:** A woodlice/louse is better known as a "rolypoly" or a sow bug. If you do the math, you will know that one has 14 legs.

**STANDARDS:**






**BSL:** 1.9, 1.10, 1.12, 5.1, 9.1, 9.3, 9.4, 9.6, 12.1, 12.3, 12.4, 12.7, 12.8, 12.9, 12.11

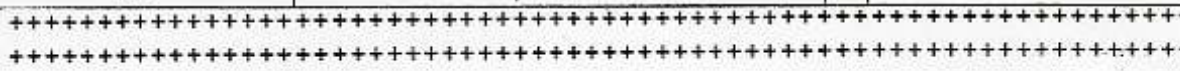
**NCTM:** 1a, 1b, 1c, 2a, 2d, 3a, 3c, 4d, 6d, 7d, 8d, 13a, 13b



**SCS:** A1, A2, B1, C1, H2, H3

Ross, Tony. Centipede's 100 Shoes. NY: Henry Holt and Company, c2002. ISBN#0-8050-7298-5.

## Centipede's Friends Get New Shoes and Socks

Bug	# of legs	x	# receiving shoes	=	Total # of shoes
 Spider					
 Beetle					
 Grasshopper					
 Wood louse/lice					
 Worm					



Bug	# of legs	x	# receiving socks	=	Total # of socks
 Spider					
 Worm					

How many legs does a woodlouse/lice have? How did you figure it out? Write an explanation of how you did it in your math journal.