

The Fine Art of Solving Story Problems Level One: Math Facts

Cross-curricular math stories that:

- apply deciphering skills to identify the proper operation
- reinforce other curricular knowledge
- practice math in all four operations.



1.13 Spiders are members of the Arachnid class. Arachnids have 8 legs. Ladybugs are members of the Insect class. Insects have 6 legs. Which has more legs? How many more?

Are Arachnids and Insects vertebrates or invertebrates?



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Sample Story Problems

Level One: Math Facts

The full set includes 10 stories & control of error for each operation: +, -, \times , \div
(Total 40 stories.) The sample set shows 2 stories for each operation

Each story comes with a related question, research prompt, or activity suggestion. These are shown in italicized type at the bottom of each card. Most are designed so that a child could complete the suggestion in a matter of minutes but some suggest research or drawing which might take longer. Children can be encouraged to choose to pursue all, some, or none of the italicized offerings depending upon the child's interests and other needs.

1.01 A group of 8 musicians is called an octet. A group of 3 musicians is called a trio. If an octet and a trio were giving a concert together, how many chairs would be needed to seat all of the musicians?

*An 8-sided shape is an **octagon** and an 8-musician group is an **octet**.
Can you think of an animal that has 8 legs or arms, whose name means "eight-feet"?*

1.03 Torsten is researching constellations. He is drawing the Big Dipper, using foil stars on black paper. The Big Dipper has 7 stars. The Little Dipper has an additional 7 stars. How many foil stars will Torsten need in all?

Find a picture of the Big Dipper with Little Dipper. If each has the same number of stars, why is one called "Big" and one "Little"? Draw these two constellations.

1.12 Triangles have 3 sides. Hexagons have 6 sides. How many fewer sides does a triangle have than a hexagon?

What is a 5-sided regular polygon called?

1.19 The cardinal is the most popular state bird, being the official state bird in 7 states, followed by the western meadowlark in 6 states. Three states chose the American Goldfinch. How many more states chose the cardinal than the goldfinch?



*Male birds are usually more brightly colored than the females.
Draw a cardinal and color it.
Is your cardinal male or female?*

1.22 Baby rabbits are called kits. A mother rabbit usually gives birth to between 4 and 8 kits at one time. If 7 mother rabbits each gave birth to 8 kits, how many baby rabbits would there be?

What adverb best describes the way that rabbits hop?

1.29 There are 3 Stamp Games in Janice's classroom. If three children can do Stamp Game division on each Stamp Game material, how many children can do Stamp Game division at the same time?

Fun fact: When Dr. Montessori created the Stamp Game, the stamps were made of paper, like postage stamps, and were pasted into children's math booklets. Would you like to do Stamp Game with paper stamps? Why or why not?

1.33 Briana is studying the life cycle of butterflies. She knows that eggs hatch and produce into caterpillars which then form into a pupa, which then becomes a butterfly! Briana has ordered 24 Painted Lady Caterpillars. She wants to split them between 4 mesh tents. How many caterpillars should Briana put in each tent?

Draw a Painted Lady butterfly with authentic markings.

1.39 There are 28 days in a lunar cycle. This cycle is divided into four equal parts, identified as main phases: new moon, first quarter, full moon, and last quarter. How many days between the new moon and the first quarter? Between the new moon and the full moon? Between the first quarter and the last quarter?

*Draw and label the phases of the moon.
You may include the waxing and waning crescent and gibbous moons if you wish.*

These cards are sized so that, once printed at 100% scale and cut, they can fit into a pencil box. Color cues indicate the operation needed to complete the problem.

If so desired, the file can be reproduced at 120% scale on legal-sized paper to make bigger cards.

If so desired, the color cues can be removed by printing the pdf in black and white.