

OPENING PROBLEM: LIONS, TIGERS AND BEARS

[7.NS.3; SMP 1, 2, 3, 7, 8]

On this page, the same animals have the same value. Different animals have different values.

Find the value of each animal and the value of . Explain your reasoning.

$$\text{Lion} + \text{Lion} + \text{Lion} = -24$$

$$(\text{Lion})^2 + \text{Tiger} = 34$$

$$\text{Tiger} - \text{Monkey} = \text{Lion}$$

$$\text{Lion} - \text{Tiger} + \text{Monkey} = \text{Sun}$$

$$\text{Lion} =$$

$$\text{Tiger} =$$

$$\text{Monkey} =$$

$$\text{Sun} =$$

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$$\text{lion} = -8 \text{ (From line 1, we see that the value of 3 lions is -24.)}$$

$$\text{tiger} = -30 \text{ (Substitute the value for lion in line 2.)}$$

$$\text{monkey} = -22 \text{ (Substitute the value for lion and tiger in line 3.)}$$

$$\text{sun} = 0 \text{ (Substitute all three known values in line 4.)}$$