Skill Set 12: Make Suppositions

Making suppositions is another higher-order heuristic skill that is often used for upper primary mathematical problems. It requires one to make an assumption to a given problem before attempting to solve it.

Example:

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A farmer has 60 chickens and cows. They have a total of 144 legs. How many chickens does the farmer have?



Think

- Make assumptions that the farmer has either all chickens or all cows.
- Look for shortage or excess of legs and solve accordingly.

Solve

Assuming all are chickens:

total number of legs = $60 \times 2 = 120$

difference in total number of legs \rightarrow 144 – 120 = 24 (excess)

difference in number of legs of chicken and cow $\rightarrow 4-2=2$

$$cows \rightarrow 24 \div 2 = 12$$

chickens \rightarrow 60 - 12 = 48

Answer The farmer has 48 chickens.

Give it a try!

Another farmer has 70 chickens and cows. They have a total of 240 legs. How many cows does the farmer have?



Think

Again look for shortage or excess of legs and solve accordingly.

Solve

Assuming all are cows:

total number of legs = ____ × ___ = ___

difference in total number of legs = ____ = ____

difference in number of legs of chicken and cow = ____ = ___ (

chickens → ____ = ____

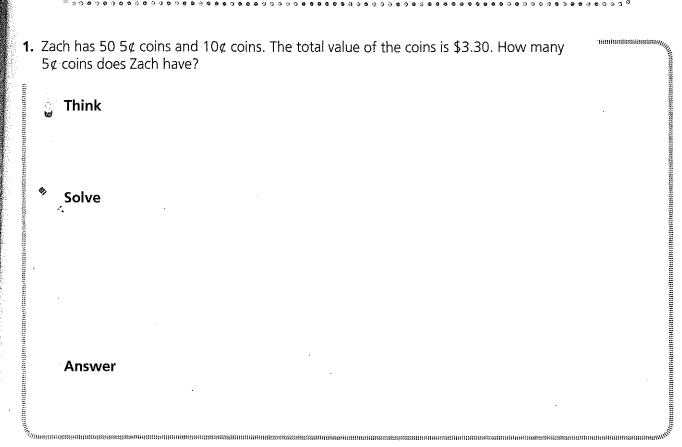
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Answer The farmer has _____ cows.

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Practice: Make Suppositions



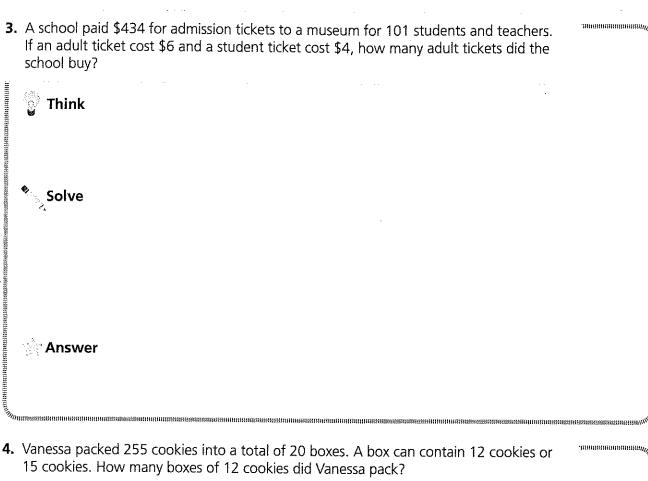
2. There are 50 beetles and spiders in a tank. They have a total of 328 legs. How many beetles are in the tank?





Answer

Practice: Make Suppositions





Think

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Answer

5. An office manager purchased 37 calendars and organizers for \$367.50. If each calendar cost \$6.80 and each organizer cost \$12.90, how many organizers did the manager purchase?



Think

Solve

ু Answer