



Addition and Subtraction

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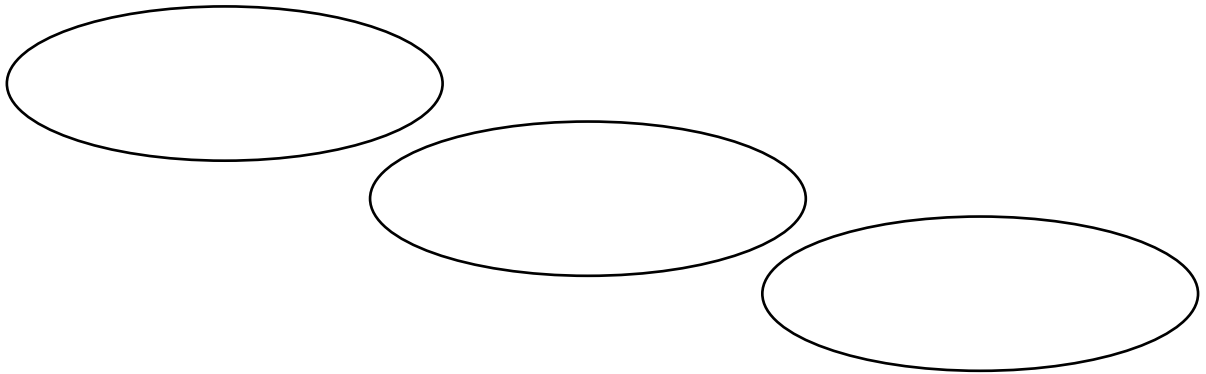
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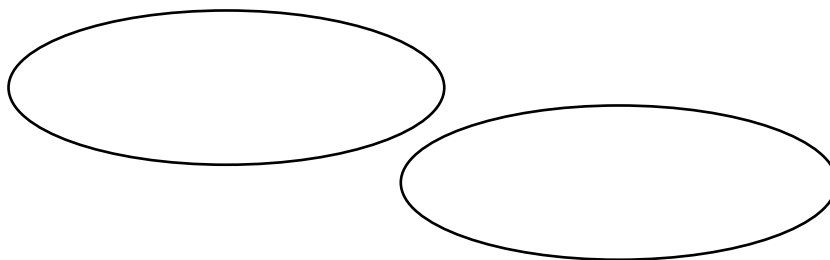
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Instructional Platform

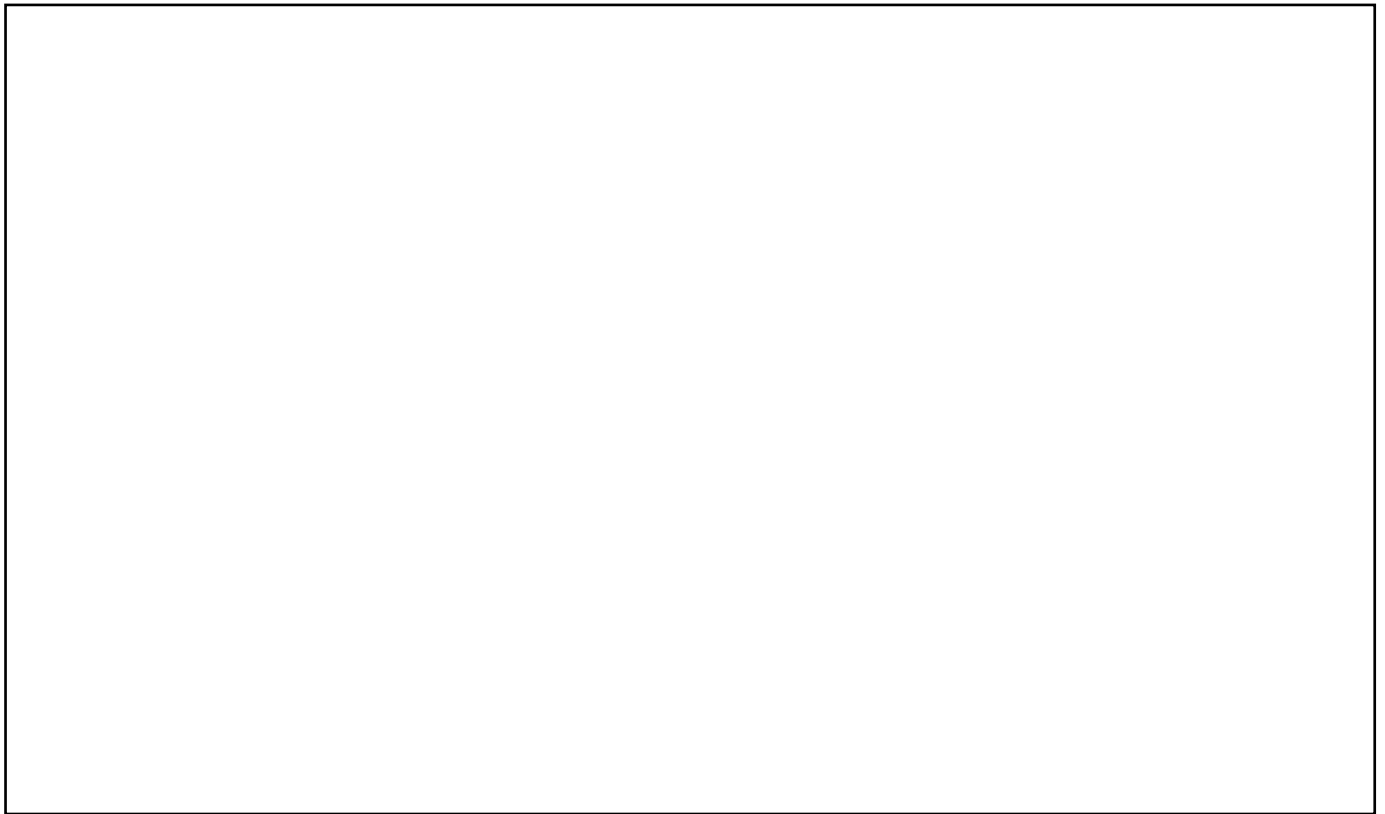
Instructional Delivery



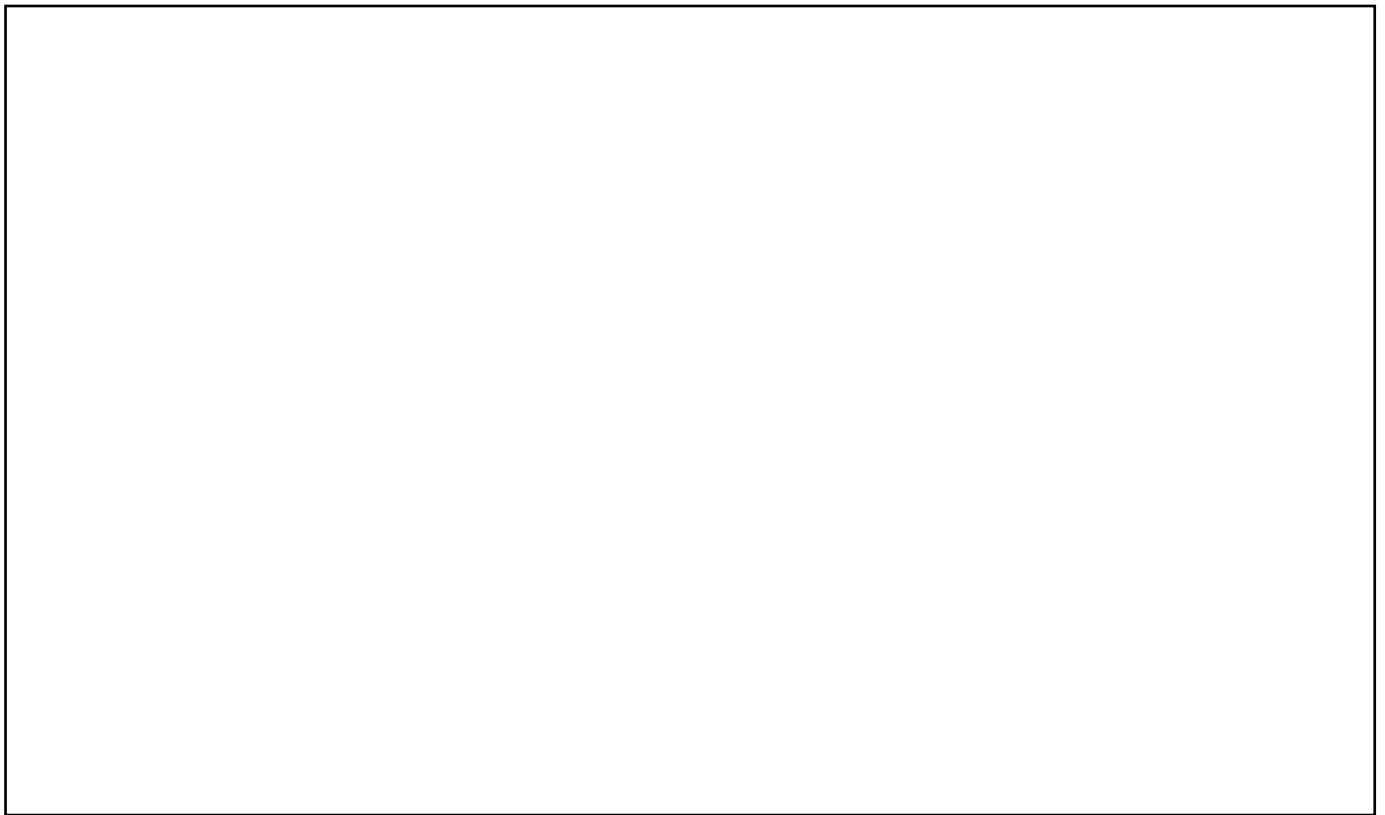
Instructional Strategies



Addition Concepts



Subtraction Concepts



Addition Computation

$$227 + 185 =$$

Subtraction Computation

$$232 - 164 =$$

Addition and Subtraction Fluency

Word-Problem Solving

Teaching Problem Solving

Attack Strategy

SOLVE

Study the problem.

Organize the facts.

Line up the plan.

Verify the plan with computation.

Examine the answer.

R-CUBES

Read the problem.

Circle key numbers.

Underline the question.

Box action words.

Evaluate steps.

Solve and check.

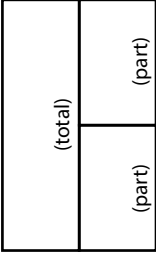
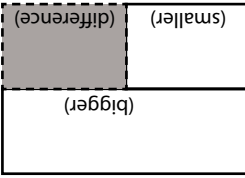
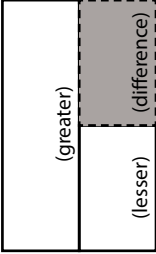
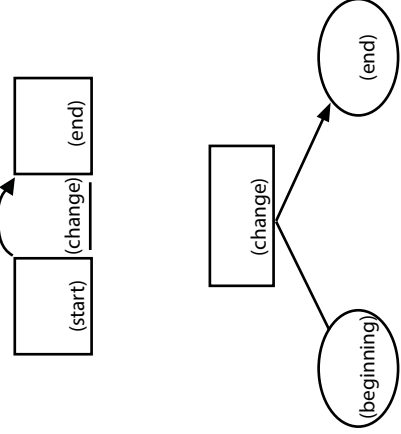
UPS ✓

UNDERSTAND
Read and explain.

PLAN
How will you solve the problem?

SOLVE
Set up and do the math!

✓ **CHECK**
Does your answer make sense?

Schema and Definition	Equations and Graphic Organizers	Examples	Variations
<p>Total (Combine; Part-part-whole) Parts combined for a sum</p>	<p>$P1 + P2 = T$ (part + part = total)</p> 	<p>Sum unknown: Lyle has 11 red apples and 18 green apples. How many apples does Lyle have altogether?</p> <p>Part unknown: Lyle has 29 red and green apples. If 11 of the apples are red, how many green apples does Lyle have?</p>	<p>More than two parts: Lyle has 34 apples. Of the apples, 11 are red, 18 are green, and the rest are yellow. How many yellow apples does Lyle have?</p>
<p>Difference (Compare) Sets compared for a difference</p>	<p>$B - s = D$ (bigger - smaller = difference)</p>  <p>$G - L = D$ (greater - less = difference)</p> 	<p>Difference unknown: Sasha wrote 85 words in her essay, and Tabitha wrote 110 words. How many fewer words did Sasha write than Tabitha?</p> <p>Bigger/greater unknown: Tabitha wrote 25 more words than Sasha. If Sasha wrote 85 words, how many words did Tabitha write?</p> <p>Smaller/lesser unknown: Tabitha wrote 110 words in her essay. Sasha wrote 25 words fewer than Tabitha. How many words did Sasha write?</p>	<p>(None)</p>
<p>Change (Join; Separate) An amount that increases or decreases</p>	<p>$ST \ +/- \ C = E$ (start +/- change = end)</p> 	<p>End (increase) unknown: Jorge had \$52. Then, he earned \$16 babysitting. How much money does Jorge have now?</p> <p>Change (increase) unknown: Jorge had \$52. Then, he earned some money babysitting. Now, Jorge has \$68. How much did Jorge earn babysitting?</p> <p>End (decrease) unknown: Jorge had \$52. Then, he spent \$29 at the ballpark. How much money does Jorge have now?</p> <p>Change (decrease) unknown: Jorge had \$52 but spent some money when he went to the ballpark. Now, Jorge has \$23. How much did Jorge spend at the ballpark?</p> <p>Start (increase) unknown: Jorge has some money, and then he earned \$16 for babysitting. Now, Jorge has \$68. How much money did he have to start with?</p> <p>Start (decrease) unknown: Jorge had some money. Then, he spent \$29 at the ballpark and has \$23 left. How much money did Jorge have before going to the ballpark?</p>	<p>Multiple changes: Jorge had \$78. He stopped and bought a pair of shoes for \$42 and then he spent \$12 at the grocery. How much money does Jorge have now?</p>

Additive Word Problems

A.

Ali delivered 12 boxes of cookies on Friday and 25 boxes of cookies on Saturday. How many boxes of cookies did Ali deliver?

B.

In March and April, it rained a total of 11 inches. If it rained 3 inches in March, how many inches did it rain in April?

C.

Sam mows lawns and made \$560 last week. She made \$95 on Monday, \$135 on Tuesday, and \$70 on Wednesday. How much did Sam make on Thursday and Friday?

NOTES ABOUT TOTAL PROBLEMS:

Additive Word Problems

D.

Audrey has 162 wooden beads and 95 glass beads. What is the difference between Audrey's wooden beads and glass beads?

E.

Damian's dog eats 9 cups of dog food each week. Monte's dog eats 4 cups less each week than Damian's dog. How much does Monte's dog eat in a week?

F.

The temperature in Norfolk was 12 degrees warmer than in Roanoke where the temperature was 79 degrees. It was 86 degrees in Marion. What was the temperature in Norfolk?

NOTES ABOUT DIFFERENCE PROBLEMS:

Additive Word Problems

- | | |
|--|---|
| <p>G.
A plant was 3 inches tall at the beginning of June. By the end of July, the plant was 9 inches tall. How many inches did the plant grow in 2 months?</p> | <p>H.
Martina has some money in her bank account. Then, she spent \$135 and has a balance of \$24. How much money did Martina have to begin with?</p> |
| <p>I.
Hui saved \$70 in January. In February, she spent \$64 of the money she saved. She saved \$92 more in March. How much has Hui saved by the end of March?</p> | <p>NOTES ABOUT CHANGE PROBLEMS:</p> |

Explicit Instruction

Problem

Step-by-Step Explanation

Explicit Instruction

Problem

Practice Opportunities

High-Level Questions

Low-Level Questions

Affirmative Feedback

Corrective Feedback