

Teaching Students to Solve Addition and Subtraction Word Problems

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8 Tickets for a play were sold on Monday, Tuesday, and Wednesday.

Tickets Sold

Day of the Week	Number of Tickets Sold
Monday	197
Tuesday	364
Wednesday	?

If a total of 900 tickets were sold for the play, how many tickets were sold on Wednesday?

- Ⓐ 300
- Ⓑ 339
- Ⓒ 449
- Ⓓ 461

Solve the problem

What skills are necessary to solve this problem?

Problem-Solving Difficulties

Teaching Problem Solving

Attack Strategy

UPS✓

UNDERSTAND

Read and explain.

PLAN

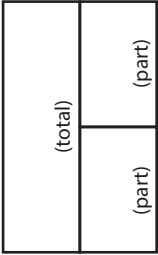
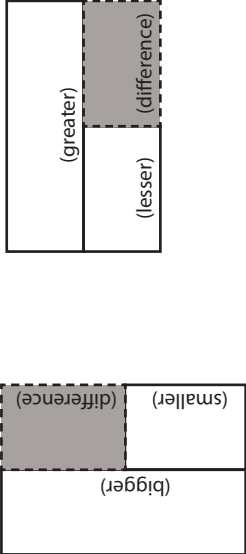
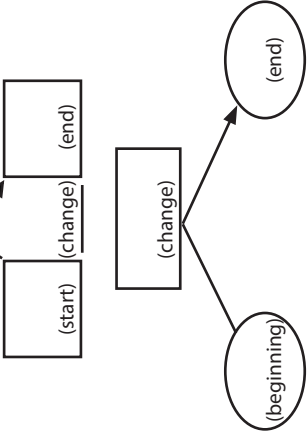
How will you solve the problem?

SOLVE

Set up and do the math!

✓CHECK

Does your answer make sense?

Schema and Definition	Equations and Graphic Organizers	Examples	Variations
<p>Combine (Total; 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>Compare (Difference) Sets compared for a difference</p>	<p>$B - S = D$ (bigger - smaller = 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.

Megan baked 8 sugar cookies and 4 chocolate chip cookies. Enter the total number of cookies Megan baked in all.

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.

Jana has 12 wooden beads and 3 glass beads. How many more wooden beads than glass beads does Jana have?

D.

Farmer Hank has 6 more cows than horses. He has 4 horses. He also has 9 chickens. How many cows does he have?

Additive Word Problems

E.

A bus had 2 passengers. At the next stop, more passengers got on the bus. Now, there are 9 passengers. How many passengers got on the bus?

F.

Martina had some money. Then, she spent \$5 on candy. Now, she has \$7. How much money did she have to start with?

G.

Sam walks to school. On Monday, she counted 5 birds. On Tuesday, she saw 2 birds. On Wednesday, she saw 4 birds. How many birds did Sam see?

H.

Hui saved \$6 in January. In February, she spent \$2 of the money she saved. She saved \$8 more in March. How much has Hui saved by the end of March?