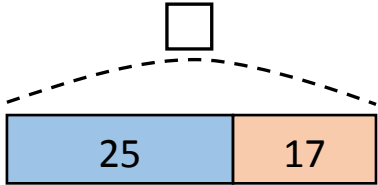
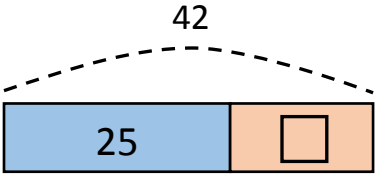
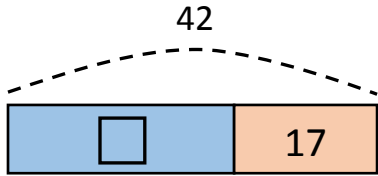


Structures Lesson – Puzzle Answer Key

Adapted from *Mathematics for Elementary Teachers*, 5th Edition, by S. Beckmann

Add to (or *Join*) Problems

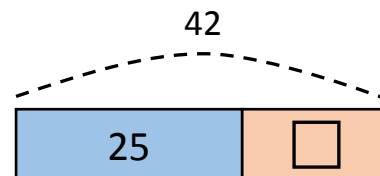
<p>Result Unknown</p> <p>Sonja had 25 buttons. She got 17 more buttons. How many does she have now?</p>	$25 + 17 = \square$	
<p>Change Unknown</p> <p>Sonja had 25 buttons. After she got some more buttons, she had 42 buttons. How many buttons did she get?</p>	<p>Situation equation (models the situation):</p> $25 + \square = 42$ <p>Solution equation (could be used to solve):</p> $42 - 25 = \square$	
<p>Start Unknown</p> <p>Sonja had some buttons. After she got 17 more, she had 42 buttons. How many buttons did Sonja have before?</p>	<p>Situation equation (models the situation):</p> $\square + 17 = 42$ <p>Solution equation (could be used to solve):</p> $42 - 17 = \square$	

Take From (or *Separate*) Problems

Result Unknown

Sonja had 42 buttons.
She gave away 25.
How many does she
have now?

$$42 - 25 = \square$$



Change Unknown

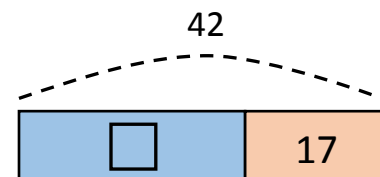
Sonja had 42 buttons.
After she gave some
away, she had 17 left.
How many buttons
did Sonja give away?

Situation equation
(models the situation):

$$42 - \square = 17$$

Solution equation
(could be used to solve):

$$42 - 17 = \square$$



Start Unknown

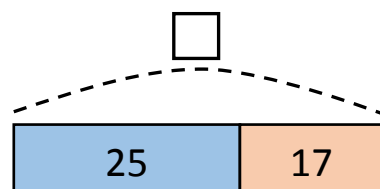
Sonja had some
buttons. After she
gave away 25, she
had 17 left. How
many buttons did
Sonja have before?

Situation equation
(models the situation):

$$\square - 25 = 17$$

Solution equation
(could be used to solve):

$$25 + 17 = \square$$

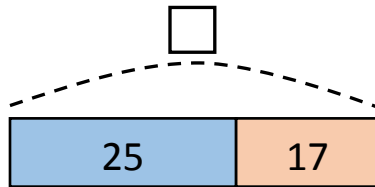


**Put Together/Take Apart (or
Part-Part-Whole) Problems**

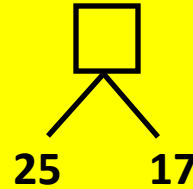
Total Unknown

Sonja has 25 blue buttons and 17 orange buttons in her collection. How many buttons does Sonja have in all?

$$25 + 17 = \square$$



Number bond

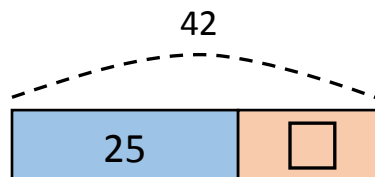


Addend Unknown

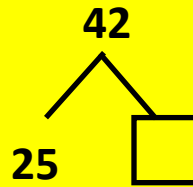
Sonja has 42 buttons. If 25 are blue and the rest are orange, how many orange buttons does Sonja have?

Situation equation: $25 + \square = 42$

Solution equation: $42 - 25 = \square$



Number bond



Both Addends Unknown

Sonja had 7 buttons and 2 jars to put them in. How many buttons can she put in the jars?

$$7 = 7 + 0 \quad 7 = 0 + 7$$

$$7 = 6 + 1 \quad 7 = 1 + 6$$

$$7 = 5 + 2 \quad 7 = 2 + 5$$

$$7 = 4 + 3 \quad 7 = 3 + 4$$

Compare Problems

Difference Unknown

Sonja has 42 buttons.

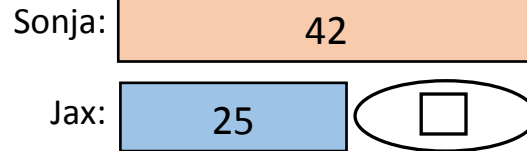
Jax has 25 buttons.

(Version with “more”):

How many more buttons does Sonja have than Jax?

(Version with “fewer”):

How many fewer buttons does Jax have than Sonja?



$$25 + \square = 42$$

$$42 - 25 = \square$$

Bigger Unknown

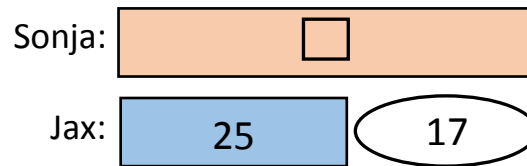
Jax has 25 buttons.

(Version with “more”):

Sonja has 17 more buttons than Jax.
How many buttons does Sonja have?

(Version with “fewer”):

Jax has 17 fewer buttons than Sonja.
How many buttons does Sonja have?



$$25 + 17 = \square$$

$$\square - 17 = 25$$

Smaller Unknown

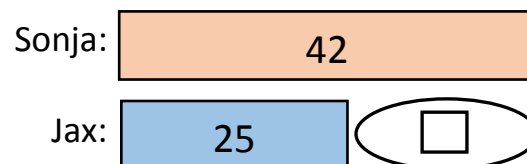
Sonja has 42 buttons.

(Version with “more”):

Jax has 17 fewer buttons than Sonja.
How many buttons does Jax have?

(Version with “fewer”):

Sonja has 17 more buttons than Jax.
How many buttons does Jax have?



$$42 - 17 = \square$$

$$\square + 17 = 42$$