## WHAT'S THE SITUATION GOT TO DO WITH IT?

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## Goals

- Identify addition \& subtraction situations
- Analyze the stages of learning within the situations
- Reflect on the complexity of the different situations and how they support the Common Core State Standards in K-5 Mathematics


## Warm-up

Solve the situation in as many ways possible:
Ruby has 7 gumdrops. Bethany gives her some more gumdrops. Now Ruby has 11 gumdrops. How many gumdrops did Bethany give Ruby?

## Children's Solution Strategies



Direct Modeling


Counting Strategy

$$
13-\square=5
$$

I Know $13=10+3$
so $10-5 \rightarrow 5+3 \rightarrow 8$

Derived Fact

| $2+1$ | $1+2$ |
| :---: | :---: |
| $2+2$ | $2+2$ |
| $2+3$ | $3+2$ |
| $2+4$ | $4+2$ |
| $2+5$ | $5+2$ |
| $2+6$ | $6+2$ |
| $2+7$ | $7+2$ |
| $2+8$ | $8+2$ |
| $2+9$ | $9+2$ |
| $2+10$ | $10+2$ |

Number Facts

## Quinn

## Children's Solution Strategies



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Number Facts

## Addition \& Subtraction Situations

Add to

Take from

$$
\begin{array}{r}
3=5-\square \\
\square+3=5
\end{array}
$$

$$
5-2=\square
$$

Put Together/
Take Apart

$$
2+\square=5
$$

$$
5=\square+\square
$$

Compare

## Addition \& Subtraction Situations



## Addition \& Subtraction Situations

|  | Result Unknown | Change Unknown | Start Unknown |
| :---: | :---: | :---: | :---: |
| Add to | Ruby took two dogs to the park. Three more dogs showed up at the park. How many dogs are there in all? | Bethany was working with two students in her classroom. Some more students came into her classroom. Then there were five students. How many students came to join the first two? | Some teachers were working with Ruby on math. Three more teachers joined them. Then there were five teachers. How many teachers were with her before? |
| Take from | Five teachers were at the table. Two teachers left. How many teachers are at the table now? | Five students were playing football at the park. Some students went home. Then there were three students. How many students left? | Ruby was teaching some students fractions. Two students had to go home. Then there were three students left. How many students were working with Ruby before? |
|  | Total Unknown | Addend Unknown | Both Addends Unknown |
| Put Together/ Take Apart | Three $5^{\text {th }}$ grade classes and two $4^{\text {th }}$ grade classes are going on a field trip. How many classes went on the field trip? | Five students passed Ruby's assessment. Three were girls and the rest were boys. How many students were boys? | Bethany has five counters. How many can she put in her red bag and how many in her blue bag? |
|  | Difference Unknown | Bigger Unknown | Smaller Unknown |
| Compare | Bethany has two children. Ruby has five children. How many more children does Ruby have than Bethany? | Ruby scored three more points than Bethany. Bethany has two points. How many points does Ruby have? | Bethany has three more classes to teach than Ruby. Ruby has five classes. How many classes does Bethany have? |

## Quinn

## Tyson



## What's next for Tyson?

- Some frogs were sitting on a lily pad. 5 more frogs hopped there. Then there were 14 frogs. How many frogs were on the lily pads before?
- 14 cookies were on a plate. Ruby ate some cookies. Then there there were 9 cookies. How many cookies did Ruby eat?
- 14 cookies are on the table. 9 are chocolate chip and the rest are peanut butter. How many cookies are peanut butter?


## Ryland

## Rosa

## Ryland

## Rosa

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## Thank you!

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