

SECURE MATERIAL – Reader Name: _____
Tennessee Comprehensive Assessment Program

TCAP/CRA

2014



2

Phase III Colored Flowers Task Anchor Set

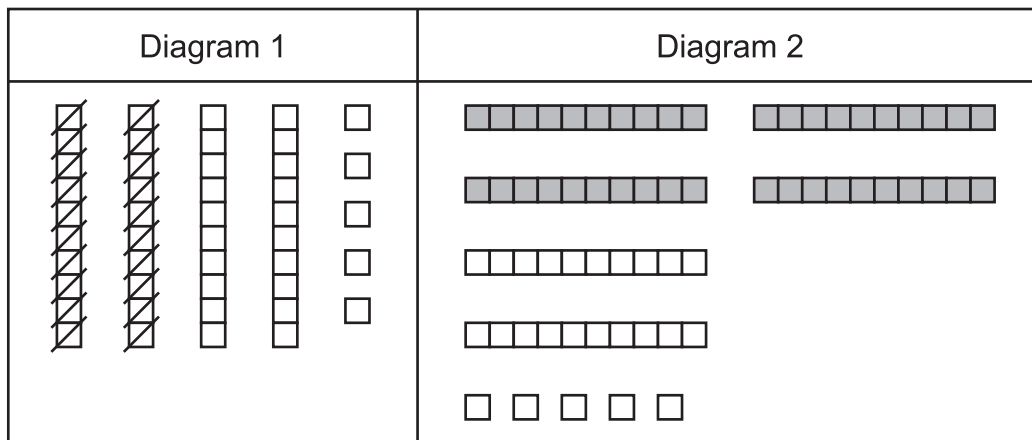
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Grade 2 — 2013–14, Phase III
Part 2: Constructed Response Task Section

Colored Flowers Task

There are 45 red flowers in the garden.
There are 20 fewer blue flowers than red flowers in the garden.
How many blue flowers are in the garden?

These diagrams show the flower story problem above.



- a. Choose one of the diagrams that you think shows the flower story problem above. Write the name of the diagram you chose on the line.

Diagram chosen: _____

Explain in words how the diagram you chose shows the flower story problem above.






Grade 2 — 2013–14, Phase III
Part 2: Constructed Response Task Section

Colored Flowers Task

- b. Write and solve an equation for this story problem. Explain how your equation represents the flower story problem.



A large rectangular box for writing the answer to question b. In the top-left corner, there is a small icon of a hand holding a pencil.

Another story problem is given below.

There are 35 fewer pink flowers than yellow flowers.
There are 65 yellow flowers.
How many pink flowers are there?

- c. Write an equation or make a diagram to show how to find the number of pink flowers, and then find the number of pink flowers.



A large rectangular box for writing the answer to question c. In the top-left corner, there is a small icon of a hand holding a pencil.



Scoring Guide

The CCSS for Mathematical Content (1 point)

2.OA.A.1 Solves in part c a “compare” situational problem with a smaller unknown number and a larger known one. _____

(1 Point)

The CCSS for Mathematical Practice (5 points)

MP1 Makes decisions and choices on how to approach the problem. Students may do this by

- choosing a diagram and attempting to explain how the diagram relates to the story problem about red and blue flowers;
- writing an expression or equation for the story problem about red and blue flowers and attempting to explain how it relates to the problem; or
- writing an expression or equation or drawing a diagram in an attempt to find the number of pink flowers.

(1 Point)

(MP1: Make sense of problems and persevere in solving them.)

MP2 Writes an equation in part b and re-contextualizes the equation by indicating the context of the red and blue flower situation. Calculation errors may exist. _____

(1 Point)

(MP2: Reason abstractly and quantitatively.)

MP3 Constructs an argument to explain how the diagram relates directly to the context of the problem. The student may indicate the red and blue flowers in the diagram and that there are 20 fewer blue flowers, referencing 45 as the whole (diagram 1), or that the two parts are being compared, with 20 fewer blue than red (diagram 2). _____

(1 Point)

(MP3: Construct viable arguments and critique the reasoning of others.)

MP4 Writes an expression to model the red and blue flowers situation in part b and writes an expression or creates a diagram to model the pink and yellow flower situation in part c. _____

(1 Point)

(MP4: Model with mathematics.)

MP6 Indicates an accurate solution of 25 in part b. _____

(1 Point)

(MP6: Attend to precision.)

TOTAL POINTS: 6

The CCSS for Mathematical Content Addressed In This Task

Represent and solve problems involving addition and subtraction.

- 2.OA.A.1 Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

The CCSS for Mathematical Practice*

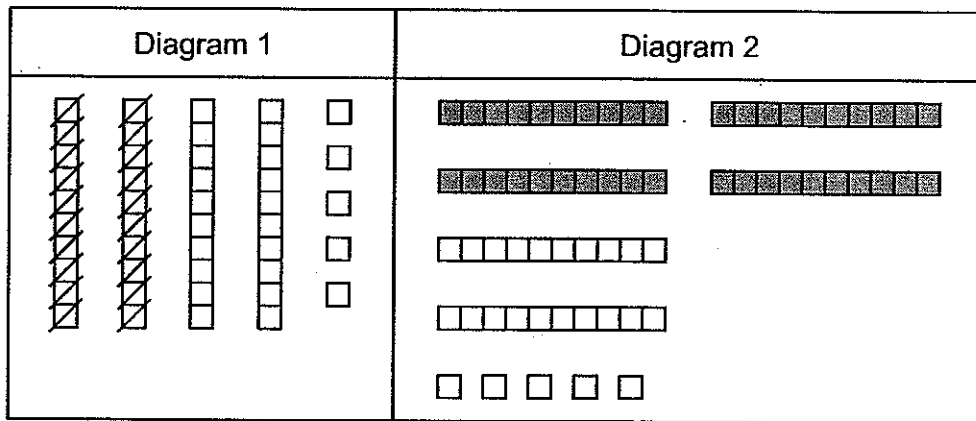
1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

* Gray type indicates Mathematical Practices not addressed in this assessment.

Colored Flowers Task

There are 45 red flowers in the garden.
 There are 20 fewer blue flowers than red flowers in the garden.
 How many blue flowers are in the garden?

These diagrams show the flower story problem above.



- a. Choose one of the diagrams that you think shows the flower story problem above. Write the name of the diagram you chose on the line.


Diagram chosen: diagram 1

Explain in words how the diagram you chose shows the flower story problem above.

There are 45 flowers in all in diagram 1. It says there is 45 red flowers and 20 fewer blue flowers and diagram 1 shows 45 blocks with 20 blocks crossed out so $45 - 20 = 25$ blue flowers.

Colored Flowers Task


- b. Write and solve an equation for this story problem. Explain how your equation represents the flower story problem.

 $45 - 20 = 25$ The reason it is $45 - 20$ is it says there is 45 red flowers and 20 fewer blue flowers, so if it says there is 45 red flowers and 20 fewer blue flowers than if you do $45 - 20$ you'll get your answer which is 25 blue flowers.

Another story problem is given below.

There are 35 fewer pink flowers than yellow flowers.
There are 65 yellow flowers.
How many pink flowers are there?

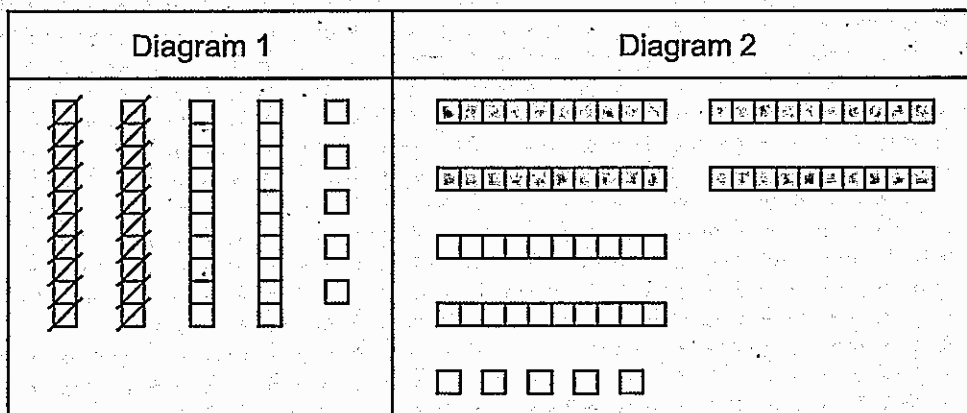
- c. Write an equation or make a diagram to show how to find the number of pink flowers, and then find the number of pink flowers.

 $65 - 35 = 30$ The reason I did $65 - 35$ is in the story it says there is 35 fewer pink flowers than yellow flowers, and it says there is 65 yellow flowers so it would be $65 - 35$.

Colored Flowers Task

There are 45 red flowers in the garden.
There are 20 fewer blue flowers than red flowers in the garden.
How many blue flowers are in the garden?

These diagrams show the flower story problem above.



- a. Choose one of the diagrams that you think shows the flower story problem above. Write the name of the diagram you chose on the line.

Diagram chosen: Diagram 1

Explain in words how the diagram you chose shows the flower story problem above.

I choose Diagram 1 was because it has 4 tens and 5 ones they took away 2 tens because it says fewer and that means subtract and the answer should be 25.

Colored Flowers Task

- b. Write and solve an equation for this story problem. Explain how your equation represents the flower story problem.

Another story problem is given below.

There are 35 fewer pink flowers than yellow flowers.
There are 65 yellow flowers.
How many pink flowers are there?

- c. Write an equation or make a diagram to show how to find the number of pink flowers, and then find the number of pink flowers.

Anchor 2

Litho 00312200174

Total Content Points: 1 (2.OA.A.1)

Total Practice Points: 4 (MP1, MP3, MP4, MP6)

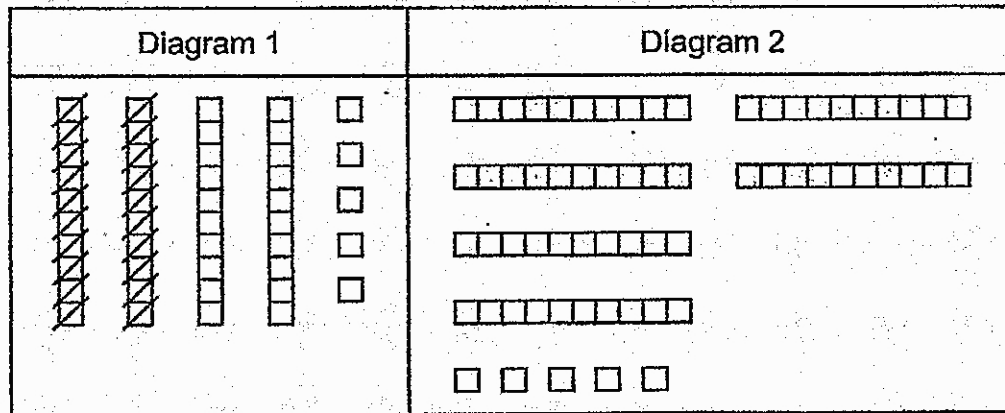
In Part C, the student solves the “compare” situational problem by finding the correct answer (30) (2.OA.A.1). The student makes decisions on how to approach the problem by choosing a diagram and attempting to explain how the diagram relates to the story problem in Part A (MP1). The student also could have received MP1 credit for writing the equation ($65 - 35 = 30$) or for drawing the diagram to find the number of pink flowers in Part C. In Part B, the student writes an equation ($45 - 20 = 25$), but does not explain how the numbers represent the context of the red and blue flower situation (no credit for MP2). In Part A, the student constructs an argument to explain how Diagram 1 relates directly to the context of the problem by referencing the 45 in the diagram as the whole (“Diagram 1 . . . has 4 tens and 5 ones”) and the 20 fewer blue flowers in the diagram as the taking away of tens (“took away 2 tens”) (MP3). MP4 is credited for modeling the red and blue flowers situation in Part B ($45 - 20$), and for modeling the pink and yellow flower situation in Part C with either the expression ($65 - 35$) or the diagram (MP4). The student indicates an accurate solution in Part B (25) (MP6).

Total Awarded Points: 5 out of 6

Colored Flowers Task

There are 45 red flowers in the garden.
There are 20 fewer blue flowers than red flowers in the garden.
How many blue flowers are in the garden?

These diagrams show the flower story problem above.



- a. Choose one of the diagrams that you think shows the flower story problem above. Write the name of the diagram you chose on the line.


Diagram chosen: Diagram 1

Explain in words how the diagram you chose shows the flower story problem above.

It shows $45 - 20$ because it has 45 blocks and they are taking 20 away.

Colored Flowers Task

- b. Write and solve an equation for this story problem. Explain how your equation represents the flower story problem.



 $45 - 20 = 25$

$$\begin{array}{r} 45 \\ -20 \\ \hline 25 \end{array}$$
 My equation goes with the story because there are 45 red flowers and 20 fewer blue flowers.

Another story problem is given below.

There are 35 fewer pink flowers than yellow flowers.
There are 65 yellow flowers.
How many pink flowers are there?

- c. Write an equation or make a diagram to show how to find the number of pink flowers, and then find the number of pink flowers.


 $65 - 35 = 30$

$$\begin{array}{r} 65 \\ -35 \\ \hline 30 \end{array}$$

Anchor 3 Litho 00012200169

Total Content Points: 1 (2.OA.A.1)

Total Practice Points: 4 (MP1, MP3, MP4, MP6)

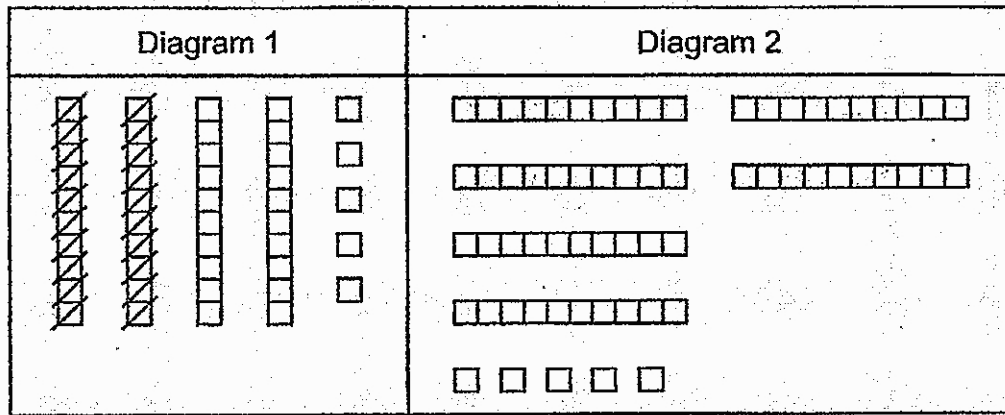
In Part C, the student solves the “compare” situational problem by finding the correct answer (30) (2.OA.A.1). The student makes decisions on how to approach the problem by choosing a diagram and attempting to explain how the diagram relates to the story problem in Part A (MP1). In Part B, the student writes an equation ($45 - 20 = 25$), but by not contextualizing the meaning of “25”, does not completely explain how the numbers represent the context of the red and blue flower situation (no credit for MP2). In Part A, the student constructs an argument to explain how Diagram 1 relates directly to the context of the problem by referencing 45 in the diagram as the whole (“it has 45 blocks”) and 20 fewer blue flowers as “taking 20 [blocks] away” (MP3). The student writes an expression to model the red and blue flowers situation in Part B ($45 - 20$) and writes an expression to model the pink and yellow flower situation in Part C ($65 - 35$) (MP4). The student indicates an accurate solution in Part B (25) (MP6).

Total Awarded Points: 5 out of 6

Colored Flowers Task

There are 45 red flowers in the garden.
There are 20 fewer blue flowers than red flowers in the garden.
How many blue flowers are in the garden?


These diagrams show the flower story problem above.



- a. Choose one of the diagrams that you think shows the flower story problem above. Write the name of the diagram you chose on the line.

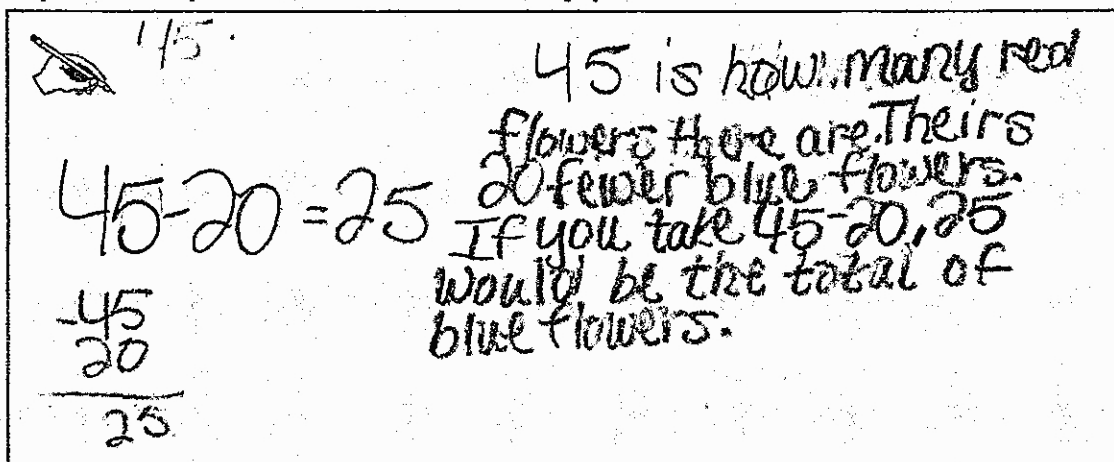
Diagram chosen: Diagram 1

Explain in words how the diagram you chose shows the flower story problem above.

 In the flower story, it's telling you there's 20 fewer blue flowers so the picture would show $45 - 20$.

Colored Flowers Task

- b. Write and solve an equation for this story problem. Explain how your equation represents the flower story problem.



45 is how many red flowers there are. There's 20 fewer blue flowers. If you take $45 - 20$, 25 would be the total of blue flowers.

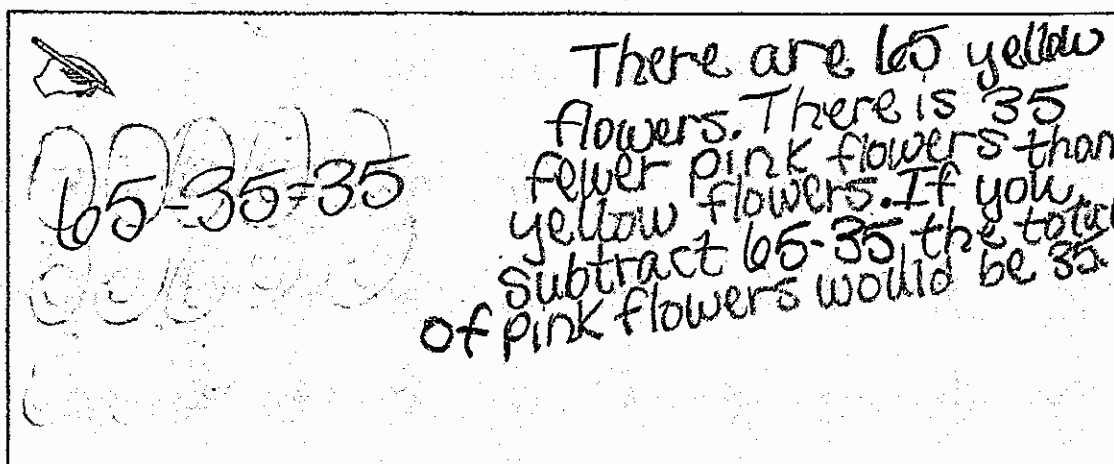
$$45 - 20 = 25$$

$$\begin{array}{r} 45 \\ -20 \\ \hline 25 \end{array}$$

Another story problem is given below.

There are 35 fewer pink flowers than yellow flowers.
There are 65 yellow flowers.
How many pink flowers are there?

- c. Write an equation or make a diagram to show how to find the number of pink flowers, and then find the number of pink flowers.



There are 65 yellow flowers. There is 35 fewer pink flowers than yellow flowers. If you subtract $65 - 35$ the total of pink flowers would be 35.

$$65 - 35 = 35$$

Anchor 4

Litho 00422200169

Total Content Points: 0

Total Practice Points: 4 (MP1, MP2, MP4, MP6)

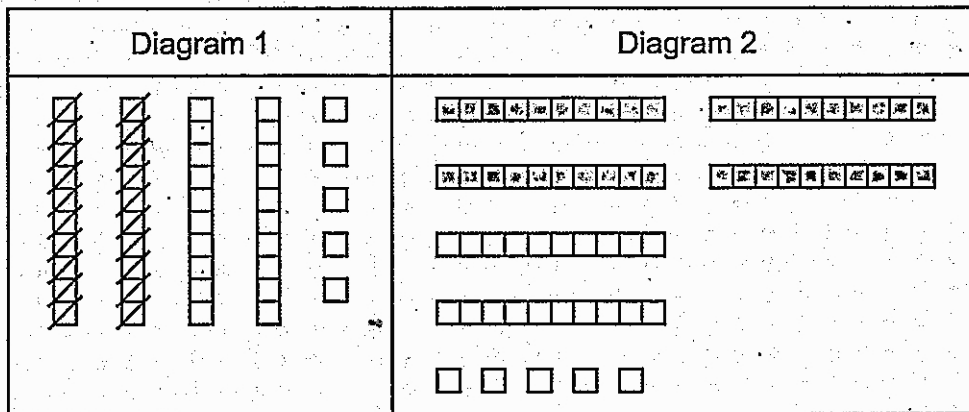
In Part C, the student determines an incorrect answer (35) for the “compare” situational problem (no credit for 2.OA.A.1). The student makes decisions on how to approach the problem by choosing a diagram and attempting to explain how the diagram relates to the story problem in Part A (MP1). In Part B, the student writes an equation ($45 - 20 = 25$) and explains how the numbers represent the context of the red and blue flower situation (“45 is how many red flowers there are. Theirs 20 fewer blue flowers . . . 25 would be the total of blue flowers”) (MP2). In Part A, the student does not construct an argument to explain how Diagram 1 relates directly to the context of the problem (no credit for MP3). The student writes an expression to model the red and blue flowers situation in Part B ($45 - 20$) and writes an expression to model the pink and yellow flower situation in Part C ($65 - 35$) (MP4). The student indicates an accurate solution in Part B (25) (MP6).

Total Awarded Points: 4 out of 6

Colored Flowers Task

There are 45 red flowers in the garden.
 There are 20 fewer blue flowers than red flowers in the garden.
 How many blue flowers are in the garden? 65


These diagrams show the flower story problem above.



- a. Choose one of the diagrams that you think shows the flower story problem above. Write the name of the diagram you chose on the line.


Diagram chosen: Diagram 1

Explain in words how the diagram you chose shows the flower story problem above.

 I choose Diagram 1 because I look at the top of the page and I saw there are 45 red flowers in the garden.

Colored Flowers Task


- b. Write and solve an equation for this story problem. Explain how your equation represents the flower story problem.


$$45 - 20 = 25$$

Another story problem is given below.

There are 35 fewer pink flowers than yellow flowers.
There are 65 yellow flowers.
How many pink flowers are there?

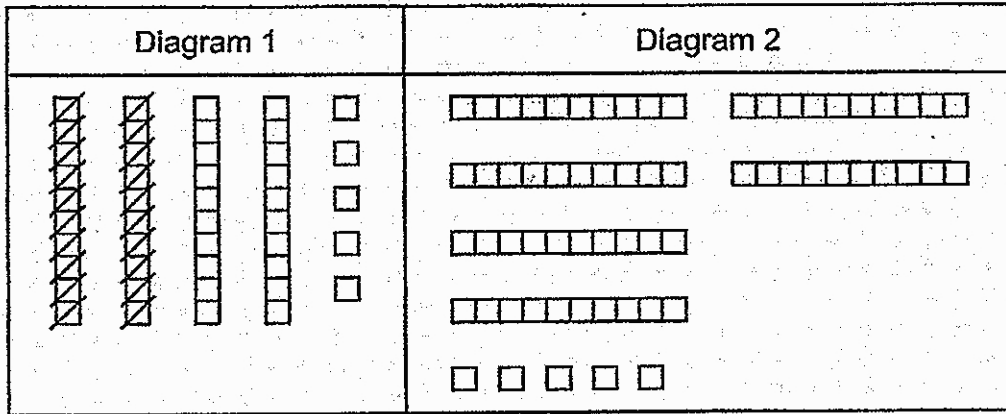
- c. Write an equation or make a diagram to show how to find the number of pink flowers, and then find the number of pink flowers.


$$30 + 35 = 65$$

Colored Flowers Task

There are 45 red flowers in the garden.
 There are 20 fewer blue flowers than red flowers in the garden.
 How many blue flowers are in the garden?


These diagrams show the flower story problem above.



- a. Choose one of the diagrams that you think shows the flower story problem above. Write the name of the diagram you chose on the line.

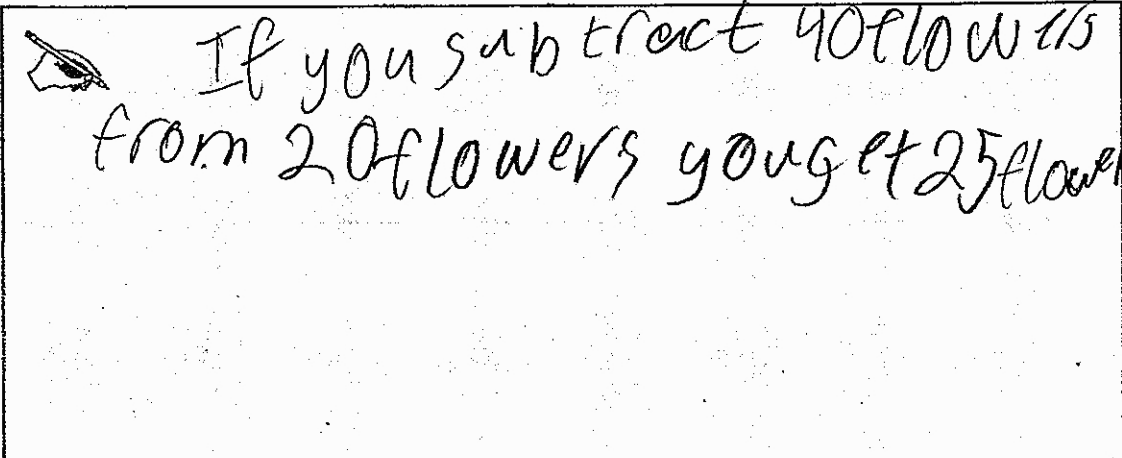
Diagram chosen: Diagram 1


Explain in words how the diagram you chose shows the flower story problem above.

 If you subtract 45 - 20 you get 25 flowers.

Colored Flowers Task

- b. Write and solve an equation for this story problem. Explain how your equation represents the flower story problem.

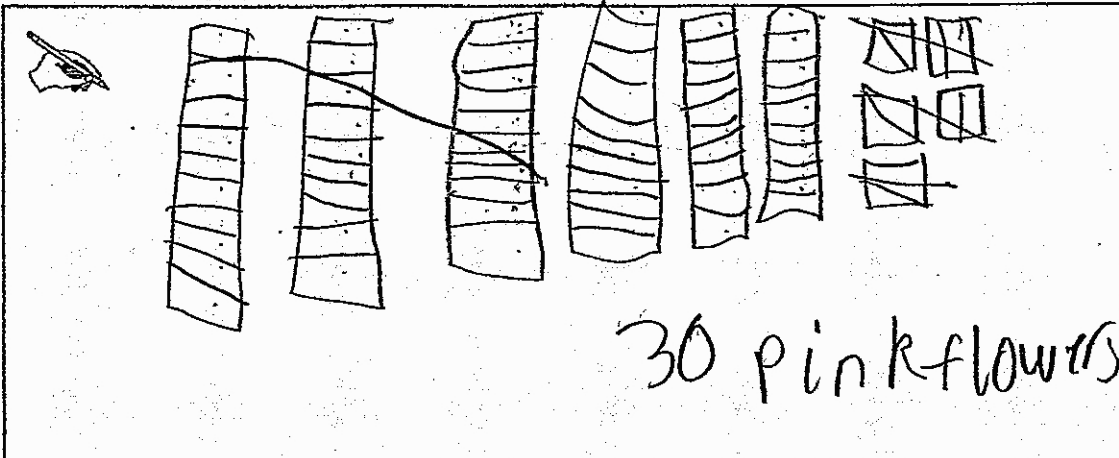



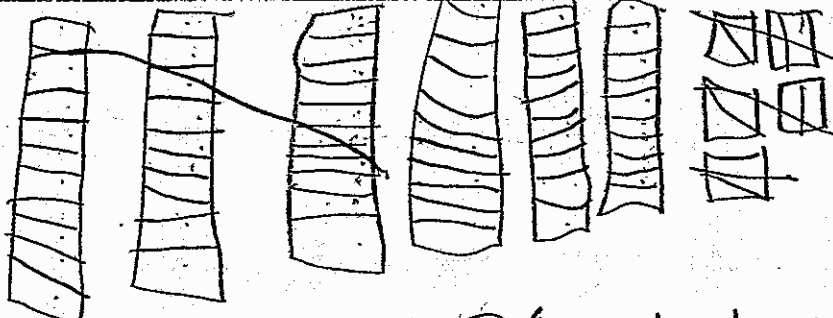
 If you subtract 40 flowers from 20 flowers, you get 25 flowers.

Another story problem is given below.

There are 35 fewer pink flowers than yellow flowers.
There are 65 yellow flowers.
How many pink flowers are there?

- c. Write an equation or make a diagram to show how to find the number of pink flowers, and then find the number of pink flowers.



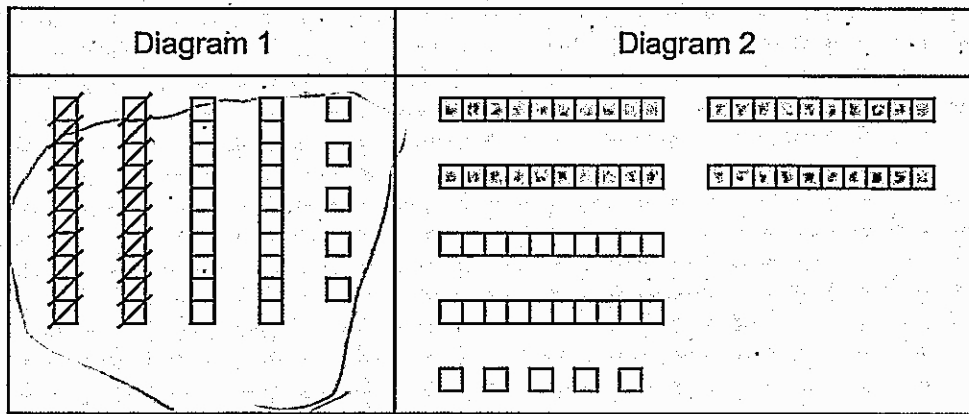
 

30 pink flowers

Colored Flowers Task

There are 45 red flowers in the garden.
 There are 20 fewer blue flowers than red flowers in the garden.
 How many blue flowers are in the garden?

These diagrams show the flower story problem above.



- a. Choose one of the diagrams that you think shows the flower story problem above. Write the name of the diagram you chose on the line.

Diagram chosen: diagram 1


Explain in words how the diagram you chose shows the flower story problem above.

I chose diagram 1 because they was subtraction and the key word was fewer and thats why chose

CITY OF PITTSBURGH

Colored Flowers Task


- b. Write and solve an equation for this story problem. Explain how your equation represents the flower story problem.

 There were $45 - 20 = 25$
 I chose diagram 1 because
 I had used subtraction

Another story problem is given below.

There are 35 fewer pink flowers than yellow flowers.
 There are 65 yellow flowers.
 How many pink flowers are there?

- c. Write an equation or make a diagram to show how to find the number of pink flowers, and then find the number of pink flowers.

 $35 - 65 = 30$
 I subtract because the key
 word was fewer and that

Anchor 7 Litho 00192200174

Total Content Points: 1 (2.OA.A.1)

Total Practice Points: 2 (MP1, MP6)

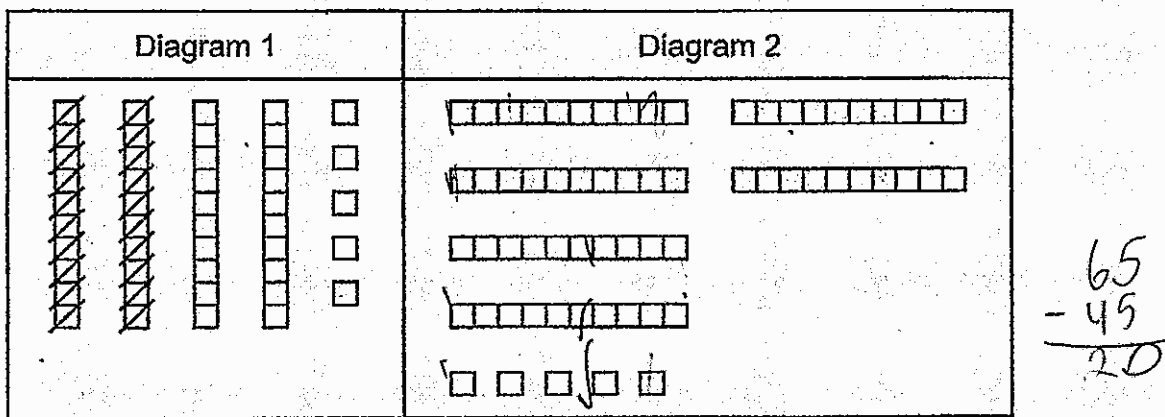
In Part C, the student solves the “compare” situational problem by finding the correct answer (30) (2.OA.A.1). The student makes decisions on how to approach the problem by writing an equation in an attempt to find the number of pink flowers in Part C (MP1). In Part B the student writes an equation ($45 - 20 = 25$), but does not explain how the numbers represent the context of the red and blue flower situation (no credit for MP2). In Part A, the student explains the choice of Diagram 1 by relating “fewer” to subtraction, but does not construct an argument to explain how the diagram relates directly to the context of the problem (no credit for MP3). The student writes an expression to model the red and blue flowers situation in Part B ($45 - 20$), but does not write a correct expression to model the pink and yellow flower situation in Part C ($35 - 65$) (no credit for MP4). The student indicates an accurate solution in Part B (25) (MP6).

Total Awarded Points: 3 out of 6

Colored Flowers Task

There are 45 red flowers in the garden.
 There are 20 fewer blue flowers than red flowers in the garden.
 How many blue flowers are in the garden?

These diagrams show the flower story problem above.



- a. Choose one of the diagrams that you think shows the flower story problem above. Write the name of the diagram you chose on the line.


Diagram chosen: Diagram 1

Explain in words how the diagram you chose shows the flower story problem above.

I picked Diagram 1 because it said 20 fewer than 45 so you have to subtract $45 - 20 = 25$.

Colored Flowers Task


- b. Write and solve an equation for this story problem. Explain how your equation represents the flower story problem.

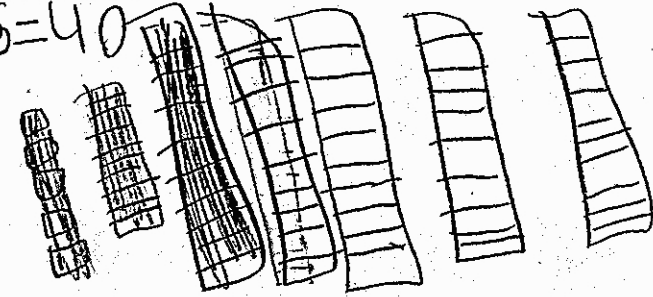
 $45 - 20 = 25$ I wrote this because because it said 20 fewer than 45.

Another story problem is given below.

There are 35 fewer pink flowers than yellow flowers.
 There are 65 yellow flowers.
 How many pink flowers are there?

- c. Write an equation or make a diagram to show how to find the number of pink flowers, and then find the number of pink flowers.

 $65 - 25 = 40$



$$\begin{array}{r} 65 \\ - 25 \\ \hline 40 \end{array}$$

Anchor 8

Litho 00352200169

Total Content Points: 0

Total Practice Points: 2 (MP1, MP6)

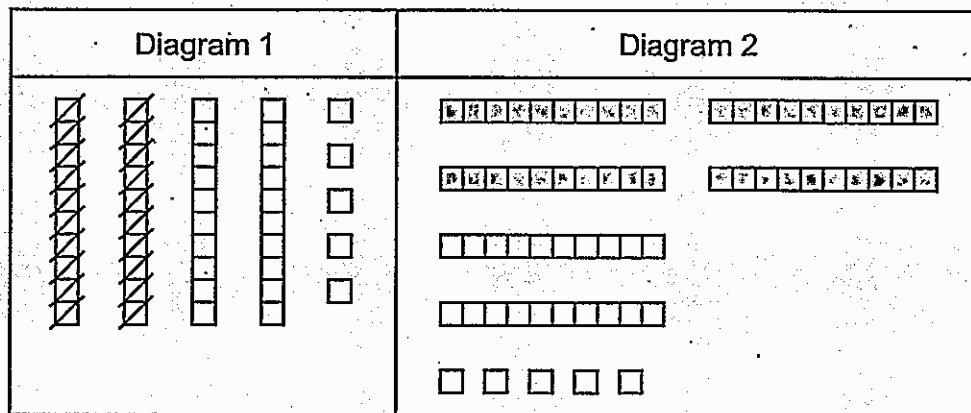
In Part C, the student determines an incorrect answer (40) for the “compare” situational problem (no credit for 2.OA.A.1). The student makes decisions on how to approach the problem by choosing a diagram and attempting to explain how the diagram relates to the story problem in Part A (MP1). In Part B, the student writes an equation ($45 - 20 = 25$), but does not explain how the numbers represent the context of the red and blue flower situation (no credit for MP2). In Part A, the student explains the choice of Diagram 1 by relating “fewer” to subtraction, but does not construct an argument to explain how the diagram relates directly to the context of the problem (no credit for MP3). The student writes an expression to model the red and blue flowers situation in Part B ($45 - 20$), but does not write a correct expression to model the pink and yellow flower situation in Part C ($65 - 25$) (no credit for MP4). The student indicates an accurate solution in Part B (25) (MP6).

Total Awarded Points: 2 out of 6

Colored Flowers Task

There are 45 red flowers in the garden.
There are 20 fewer blue flowers than red flowers in the garden.
How many blue flowers are in the garden?

These diagrams show the flower story problem above.



- a. Choose one of the diagrams that you think shows the flower story problem above. Write the name of the diagram you chose on the line.


Diagram chosen: Diagram 1

Explain in words how the diagram you chose shows the flower story problem above.

I chose Diagram 1 because $45 - 20 = 25$. I knew I was going to subtract because the key word was fewer and than.

Colored Flowers Task


- b. Write and solve an equation for this story problem. Explain how your equation represents the flower story problem.

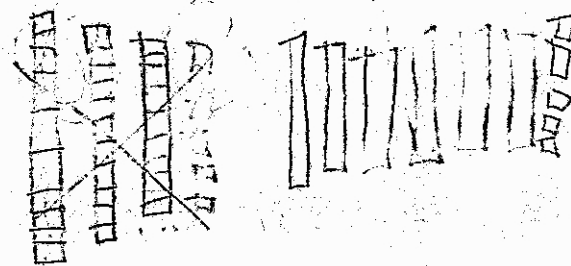
 The numbers were 45 and 20 and my keyword was fewer and than.

Another story problem is given below.

There are 35 fewer pink flowers than yellow flowers.
There are 65 yellow flowers.
How many pink flowers are there?

- c. Write an equation or make a diagram to show how to find the number of pink flowers, and then find the number of pink flowers.

 $65 - 35 = 30$



Anchor 9

Litho 00282200174

Total Content Points: 1 (2.OA.A.1)

Total Practice Points: 1 (MP1)

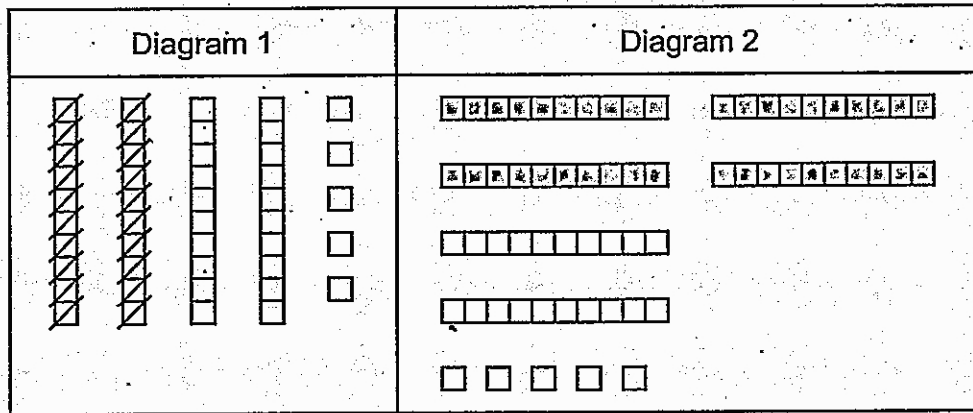
In Part C, the student solves the “compare” situational problem by finding the correct answer (30) (2.OA.A.1). The student makes decisions on how to approach the problem by choosing a diagram and attempting to explain in Part A how the diagram relates to the story problem about red and blue flowers (MP1). In Part B, the student does not write an equation and therefore cannot explain how the numbers in the equation represent the context of the red and blue flower situation (no credit for MP2). In Part A, the student explains the choice of Diagram 1 by relating “fewer” to subtraction, but does not construct an argument to explain how the diagram relates directly to the context of the problem (no credit for MP3). Although the student writes a correct expression to model the pink and yellow flower situation in Part C ($65 - 35$), there is not an expression in Part B to model the red and blue flowers situation (no credit for MP4). The student does not provide a solution in Part B (no credit for MP6).

Total Awarded Points: 2 out of 6

Colored Flowers Task

There are 45 red flowers in the garden.
 There are 20 fewer blue flowers than red flowers in the garden.
 How many blue flowers are in the garden?

These diagrams show the flower story problem above.



- a. Choose one of the diagrams that you think shows the flower story problem above. Write the name of the diagram you chose on the line.

Diagram chosen: 25

Explain in words how the diagram you chose shows the flower story problem above.

I look on the Diagram

Colored Flowers Task

- b. Write and solve an equation for this story problem. Explain how your equation represents the flower story problem.

My answer is 25.

Another story problem is given below.

There are 35 fewer pink flowers than yellow flowers.
 There are 65 yellow flowers.
 How many pink flowers are there?

- c. Write an equation or make a diagram to show how to find the number of pink flowers, and then find the number of pink flowers.

My Answer is 35 90

My Answer is 65

Anchor 10

Litho 00152200174

Total Content Points: 0

Total Practice Points: 1 (MP6)

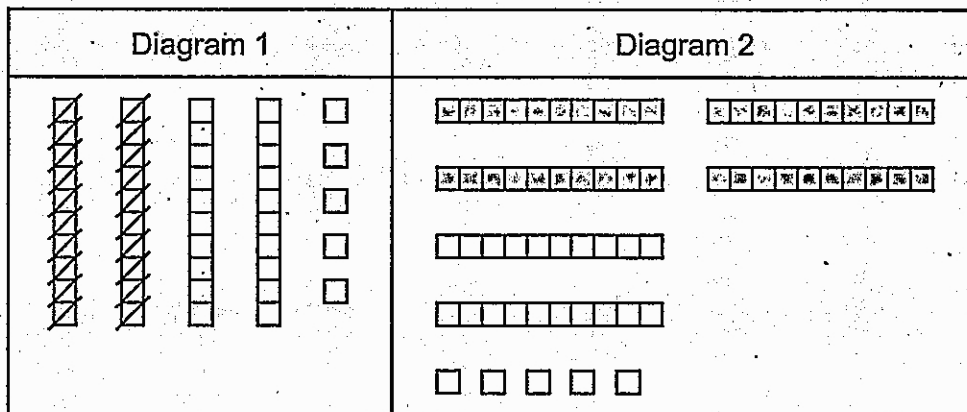
In Part C, the student determines an incorrect answer (90) for the “compare” situational problem (no credit for 2.OA.A.1). The student provides little evidence for making decisions on how to approach the problem. In Part A, a diagram is not chosen; in Part B, there is no equation or expression written; and, in Part C, the diagram and answer demonstrate an incorrect operation for the problem (no credit for MP1). In Part B, the student does not write an equation, and therefore cannot explain how the numbers in the equation represent the context of the red and blue flower situation (no credit for MP2). The student does not construct an argument in Part A to explain how the diagram relates directly to the context of the problem (no credit for MP3). The student does not write an expression to model the red and blue flowers situation in Part B and does not draw a correct diagram to model the pink and yellow flower situation in Part C (no credit for MP4). The student indicates an accurate solution in Part B (25) (MP6).

Total Awarded Points: 1 out of 6

Colored Flowers Task

There are 45 red flowers in the garden.
 There are 20 fewer blue flowers than red flowers in the garden.
 How many blue flowers are in the garden?

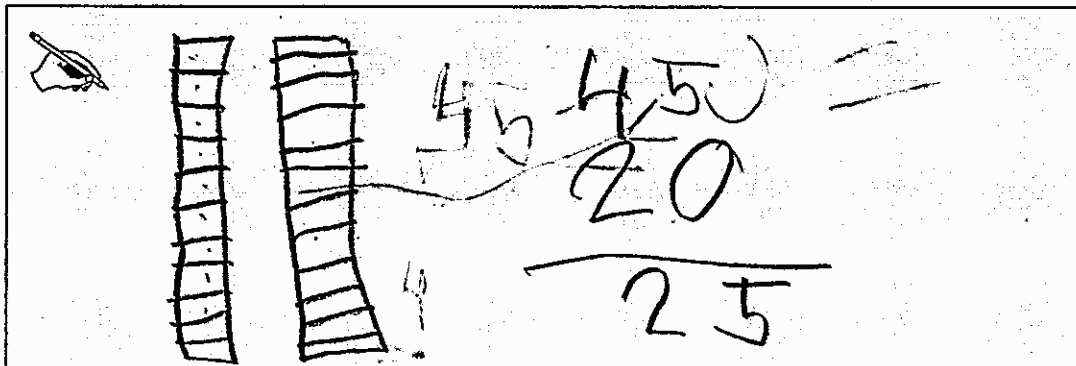
These diagrams show the flower story problem above.



- a. Choose one of the diagrams that you think shows the flower story problem above. Write the name of the diagram you chose on the line.

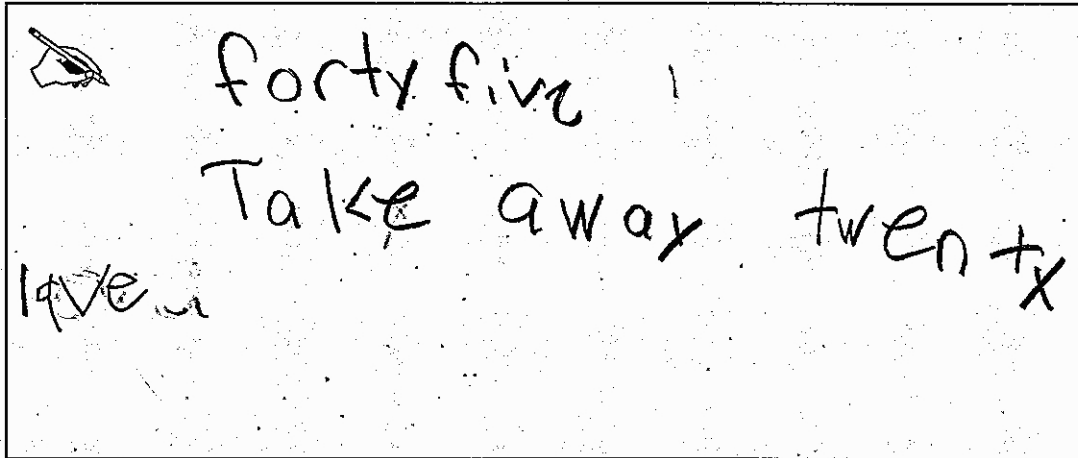
Diagram chosen: Diagram 1

Explain in words how the diagram you chose shows the flower story problem above.



Colored Flowers Task

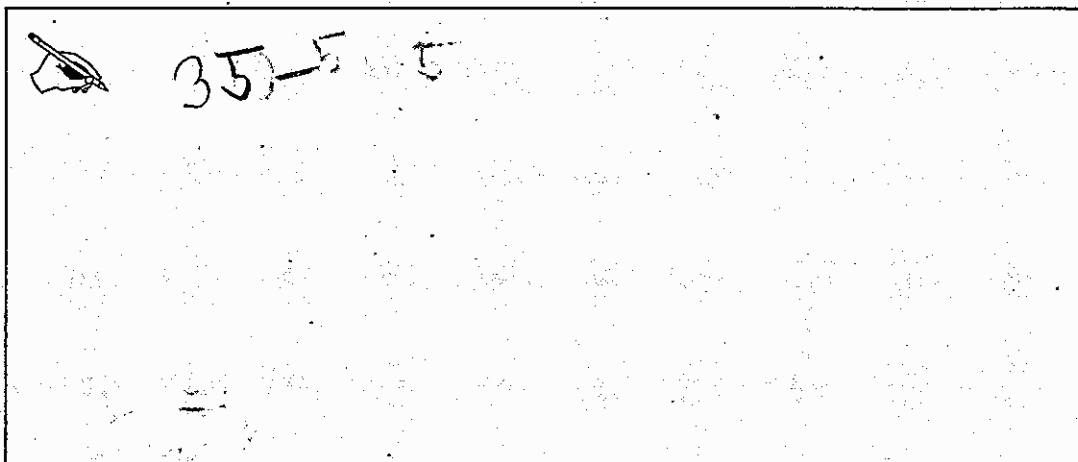
- b. Write and solve an equation for this story problem. Explain how your equation represents the flower story problem.



Another story problem is given below.

There are 35 fewer pink flowers than yellow flowers.
 There are 65 yellow flowers.
 How many pink flowers are there?

- c. Write an equation or make a diagram to show how to find the number of pink flowers, and then find the number of pink flowers.



Total Content Points: 0

Total Practice Points: 0

In Part C, the student does not solve the “compare” situational problem (no credit for 2.OA.A.1). The student provides little evidence for making decisions on how to approach the problem. In Part A, there is no attempt to explain in words how Diagram 1 shows the story problem; in Part B, there is no attempt to explain how the verbal expression relates to the story problem; and, in Part C, there is negligible work (no credit for MP1). In Part B, the student does not write an equation, and therefore cannot explain how the numbers in the equation represent the context of the red and blue flower situation (no credit for MP2). The student does not construct an argument in Part A to explain how the diagram relates directly to the context of the problem (no credit for MP3). The student does not write an expression to model the red and blue flowers situation in Part B, and does not write an expression or draw a correct diagram to model the pink and yellow flower situation in Part C (no credit for MP4). The student does not provide a solution in Part B (no credit for MP6).

Total Awarded Points: 0 out of 6