Grade 3: Unit 3: Lesson 8
From Drawings to an Algorithm

imagine learning

Learning Goals:

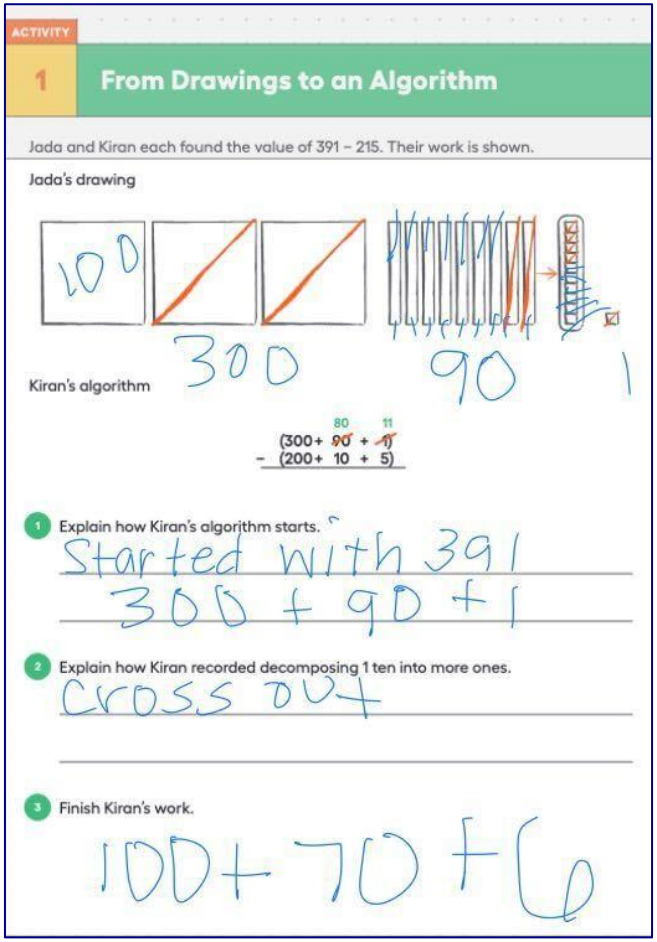
- Interpret (orally and in writing) the steps of a written subtraction algorithm.
- Match (orally) base-ten diagrams and algorithms that represent the same subtraction strategy.

Activity Purpose

- Students to use their knowledge of base-ten diagrams and place value to make sense of a subtraction algorithm.

Approaches to Monitor

- Look for students that make clear connections between the representations.



ACTIVITY 1

From Drawings to an Algorithm

Jada and Kiran each found the value of 391 – 215. Their work is shown.

Jada's drawing

100 300 90 1

Kiran's algorithm

80 11
(300 + 90 + 1)
– (200 + 10 + 5)

1. Explain how Kiran's algorithm starts.

Started with 391
300 + 90 + 1

2. Explain how Kiran recorded decomposing 1 ten into more ones.

Cross out

3. Finish Kiran's work.

100 + 70 + 6

Grade 4: Unit 4: Lesson 21
What If There is Nothing to Decompose?

imagine learning

Learning Goals:

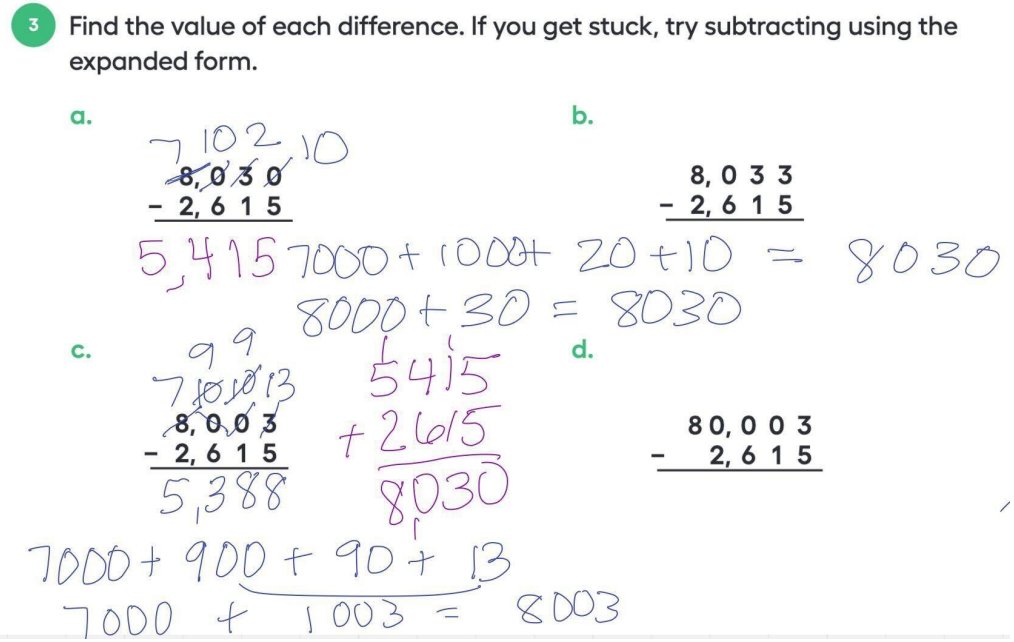
- Interpret (orally) written methods that use the standard algorithm to subtract when the minuend has several zeros.
- Use the standard algorithm to subtract within 100,000 when the minuend has several zeros.

Activity Purpose

- Examine subtraction cases in which non-zero digits are subtracted from zero digits.

Approaches to Monitor

- Look for ways students demonstrate consecutive decomposing when multiple zeros are involved.



3 Find the value of each difference. If you get stuck, try subtracting using the expanded form.

a.

8,030
− 2,615
5,415

7000 + 1000 + 20 + 10 = 8030
8000 + 30 = 8030

b.

8,033
− 2,615

c.

8,003
− 2,615
5,388

5415
+ 2615
8030

7000 + 900 + 90 + 13
7000 + 1003 = 8003

d.

80,003
− 2,615

Grade 5: Unit 5: Lesson 16
Sums and Differences

imagine learning

Learning Goal:

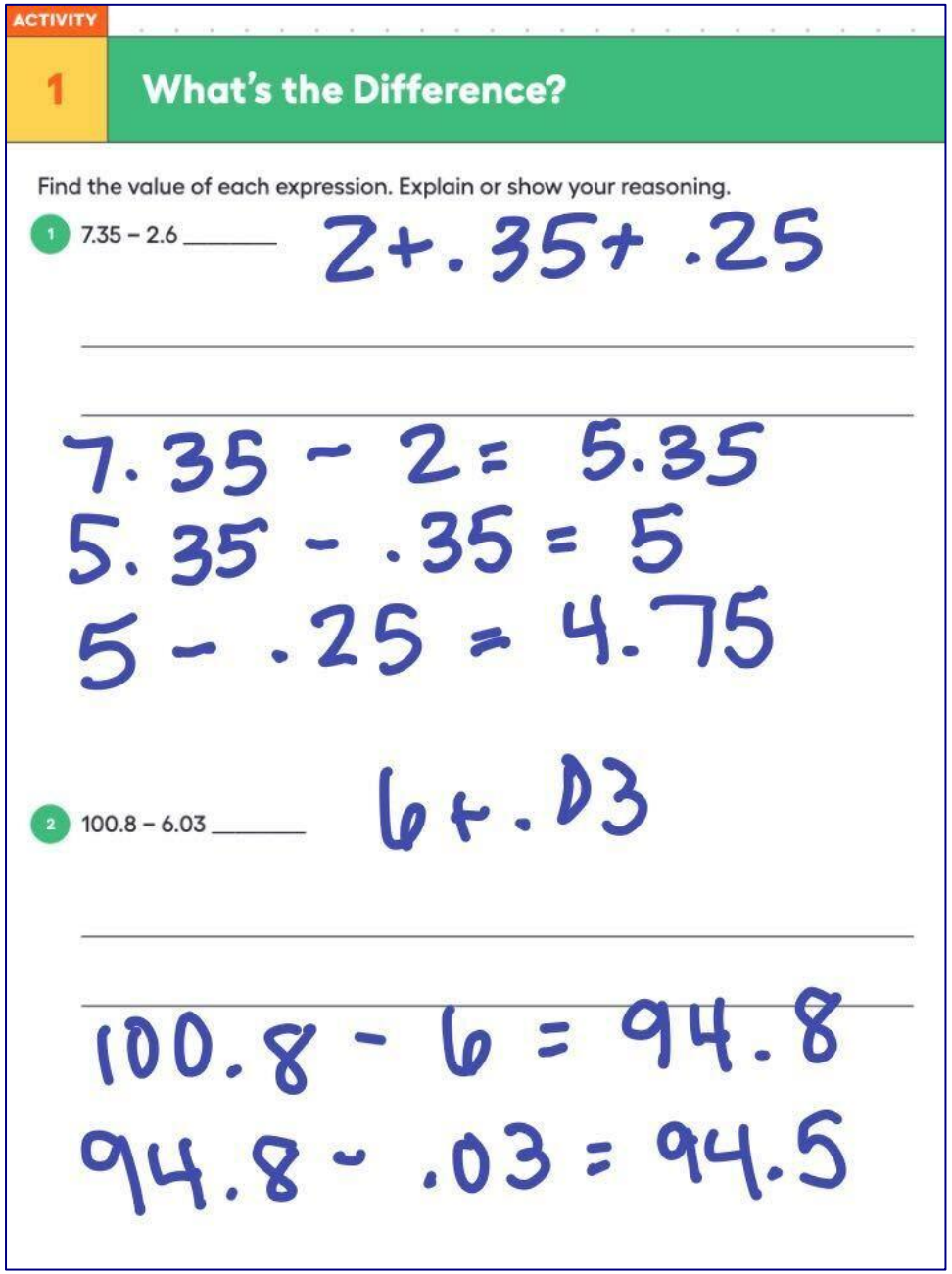
- Calculate sums and differences of decimals to hundredths and explain (orally and in writing) strategies used.

Activity Purpose

- Solve problems finding decimal differences and then share thinking and strategies.

Approaches to Monitor

- Standard algorithm
- Other strategies such as adding on or subtracting in different ways by place value



ACTIVITY 1 What's the Difference?

Find the value of each expression. Explain or show your reasoning.

1 7.35 − 2.6 _____ 2+.35+.25

7.35 - 2 = 5.35
5.35 - .35 = 5
5 - .25 = 4.75

2 100.8 − 6.03 _____ 6+.03

100.8 - 6 = 94.8
94.8 - .03 = 94.5