Standards INSTITUTE

Rigor

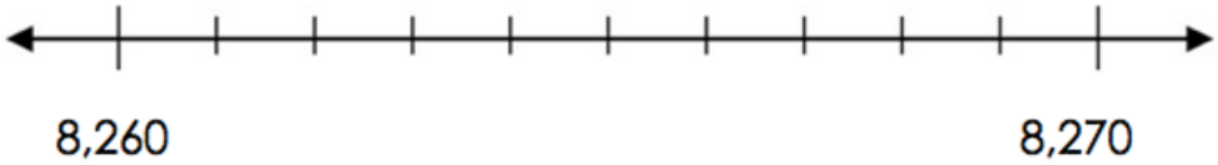
Task Handout, Grade 4

"A social justice priority in mathematics education is to openly challenge deficit thinking and the institutional tools and practices that perpetuate static views about children and their mathematics competencies. Eliminating the deficit discourse by focusing on learning rather than labels is a key step toward a more just and equitable mathematics education." —*National Council of Supervisors of Mathematics and TODOS: Mathematics for All*

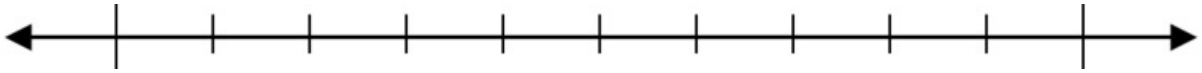
Conceptual Understanding Task #1

Task

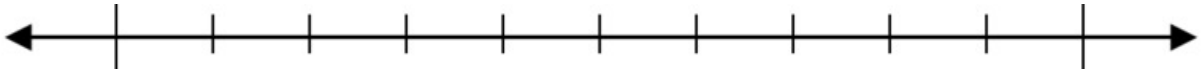
a. The number 8,263 lies between 8,260 and 8,270 on the number line. Label all the other tick marks between 8,260 and 8,270. Is 8,263 closer to 8,260 or 8,270 on the number line?



b. Which hundred is 8,263 nearest to on the number line? Plot 8,200 and 8,300 on the two outermost spots on the number line below. Then plot 8,263 to prove your answer.



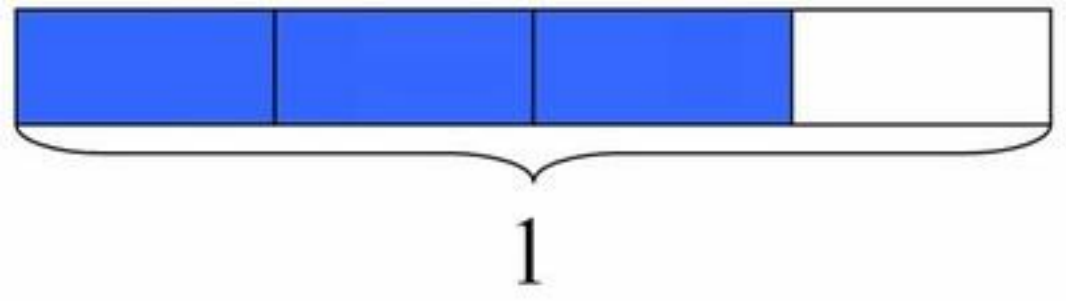
c. Which thousand is 8,263 nearest to on the number line? Plot 8,000 and 9,000 on the two outermost spots on the number line below. Then plot 8,263 to prove your answer.



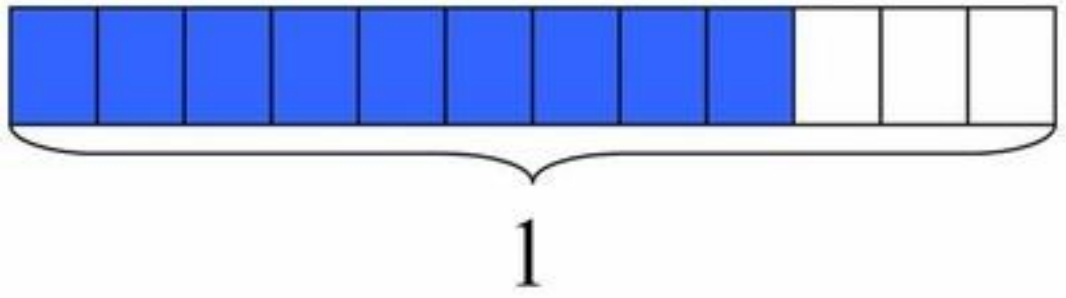
Conceptual Understanding Task #2

Task

a. The rectangle below has length 1. What fraction does the shaded part represent?



b. The rectangle below has the same length as the rectangle above. What fraction does the shaded part represent?



c. Use the pictures to explain why the two fractions represented above are equivalent.

Procedural Skills and Fluency Task #1

Task

Find the sums.

a. $\frac{9}{10} + \frac{8}{100}$

b. $\frac{7}{100} + \frac{3}{10}$

c. $\frac{2}{10} + \frac{41}{100}$

d. $\frac{23}{100} + \frac{7}{10}$

e. $\frac{7}{10} + \frac{20}{100}$

f. $\frac{1}{10} + \frac{9}{100} + \frac{13}{10} + \frac{21}{100}$

Procedural Skills and Fluency Task #2

Task

Mr. Liu asked the students in his 4th grade class to measure their heights. Here are some of the heights they recorded:

Student	Height
Sarah	50 inches
Jake	414 feet
Andy	112 yards
Emily	4 feet and 4 inches

List the four students from tallest to shortest.

Application Task #1

Task

Karl's rectangular vegetable garden is 20 feet by 45 feet, and Makenna's is 25 feet by 40 feet. Whose garden is larger in area?

Application Task #2

Task

Every year a carnival comes to Hallie's town. The price of tickets to ride the rides has gone up every year.

Year	Ticket Price
2008	$2.00
2009	$2.50
2010	$3.00
2011	$3.50
2012	$4.00

a. In 2008, Hallie's allowance was $9.00 a month. How many carnival tickets could she buy with one month's allowance?

b. If her allowance had stayed the same, $9.00 a month, how many carnival tickets could she buy in 2012?

c. In 2012, Hallie's allowance was $14.00 per month. How much did her monthly allowance increase between 2008 and 2012?

d. How much more did a carnival ticket cost in 2012 than it did in 2008?

e. Was Hallie able to buy more carnival tickets in 2008 or in 2012 with one month's allowance?

f. What would Hallie's allowance need to be in 2012 in order for her to be able to buy as many carnival tickets as she could in 2008?

g. What happens to your ability to buy things if prices increase and your allowance doesn't increase?