2.NBT Boxes and Cartons of Pencils
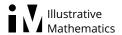
Alignments to Content Standards: 2.NBT.A.1

Task

Pencils are packed 10 in a box. A classroom carton has 10 boxes.

a. Jem has 1 carton and 4 boxes. How many pencils does Jem have all together?

b. Lee needs to pack 370 pencils.

> i. How many boxes does Lee need?

> ii. If Lee puts the boxes in cartons, how many cartons can he completely fill?

c. Ms. Kato needs 10 pencils for each of her 26 students.

> i. If she can only buy boxes, how many boxes does she need?

> ii. She finds out that it is cheaper to buy pencils in cartons. How many cartons should she buy? How many additional boxes will she need?

IM Commentary

This task is a kernel for an instructional task that could be elaborated with commentary about teaching strategies and examples of student work. When this website is fully functional, teachers will be able to submit tasks and related materials for review. Illustrative Mathematics invites teachers to help us with this.

Solution

a. Jem has a total of 140 pencils.

b. To pack 370 pencils,

     i. Lee needs 37 boxes.

     ii. If he puts the boxes in cartons, he can completely fill 3 cartons and will have 7 boxes left over.

c. Ms. Kato needs 10 pencils for each of her 26 students.

     i. If she can only buy boxes, she needs 26 boxes.

     ii. She can buy 2 cartons and will need 6 additional boxes. Alternatively, she can buy 3 cartons, but she will have some boxes left over.