3.NBT Rounding to 50 or 500

[Alignment 1: 3.NBT.A.1](#)

When rounding to the nearest ten:

a. What is the **smallest** whole number that will round to 50?

b. What is the **largest** whole number that will round to 50?

c. How many different whole numbers will round to 50?

When rounding to the nearest hundred:

d. What is the **smallest** whole number that will round to 500?

e. What is the **largest** whole number that will round to 500?

f. How many different whole numbers will round to 500?

Commentary:
It is tempting to subtract the result of (a) and (b) (54-45 = 9) to get (c), but the count includes 45 through 54. Subtracting would leave 45 out and be one short.

Some students will approach problems (a) through (c) in an exploratory way, listing all the numbers "close to" 50 and counting. Using this approach their most likely mistake is to leave off 50 itself; they may also include both 45 and 55 even when they are supposed to be adopting a consistent "round up when the last digit is 5" rule.

Be careful of a possible "two wrongs make a right" effect here; a student who answers 45 for (a) and 55 for (b) and simply attempts to subtract will get a correct answer for (c), but does not have full understanding of the problem.

Expanding the possible number space for (d) to (f) takes enough time that the students will likely desire a shortcut, using the answers from (a) through (c) as inspiration. There still may be students who laboriously list every number; the teacher should encourage a more thoughtful approach.

Solution: Solution

a. 45

b. 54

c. 10

d. 450

e. 549

f. 100