4th Grade
Number and Operations
in Base Ten

Set 3

Daily Practice Items
And
Answer Keys
NUMBER AND OPERATIONS IN BASE TEN: PRACTICE ITEMS

OVERVIEW

Resources:

Attached you will find practice items for Number and Operations in Base Ten. These practice items are packaged so that you will have weekly items to use in your classroom as bell ringers or engagement items. Three items matching this domain have been provided for each day of this weekly set of practice items. No more than 15-20 minutes a day should be spent on these items in order for students to solve the problems and to debrief whole group.

The purpose of using these practice items daily is to be able to formatively assess student understanding, or the lack of it, in this domain. Being able to gather evidence of student learning and misconceptions in the moment will give you the flexibility to change your instruction to meet their needs. As the instructional decision-maker, you are able to adjust your methods for whole class or small groups to address student misconceptions and move them toward proficiency.

The practice items represent a variety of standards for Number and Operations in Base Ten. Three weeks of practice items have been selected for this domain. Because there are only three weeks, not every standard will be addressed.

The goal is for you to have a total of 10 weeks of practice items that represent the 5 domains in 4th grade. We would like for you to use these items for a 10 week period between the time you receive them and the end of January. If used daily for student practice, in accordance with our recommendations or tips, the outcome will be an improvement in ACT Aspire test scores.

At the end of each weekly packet, you will find an answer key for your use. Some items include possible responses that students might have on the constructed response items.

Separate resources available to you are tasks addressing each of the domains. These tasks and practice items are interchangeable. If your students, or a group of students, are ready for problems that are a bit more rigorous, feel free to use the tasks. These tasks require students to think about an efficient strategy to solve the problem, show their work and justify their reasoning. This is the ultimate goal for what we want students to be able to do.

Recommendations or Tips:

When administering the practice items, please take the time to have the students read through the daily items to see if they have any questions about vocabulary or what the problem is asking them to do. Taking the time to do these things now, will help assure that the students are familiar with mathematical vocabulary and different question types before the actual test.

Providing Feedback to Students:

Since the purpose of the test items is to get at student understanding, it is not enough just to give the practice items as bell ringers or engagement items. A key part of the process in advancing student thinking, is to debrief the practice items and provide specific feedback on the student's thinking and performance. The key to getting at student understanding and thinking is to always have them explain how they solved the problem. This can be done during the sharing out process by asking effective questions. It is difficult to make student
thinking and understanding visible by just giving **multiple choice** questions and determining whether their response is correct or incorrect. Asking questions similar to the ones below can help students verbalize the reasoning for their choice:

- To get the right answer, what concept do you have to be aware of?
- Why are the other 3 answers not correct?
- What strategy did you use to solve the problem? Why did you use that particular strategy?
- Is there another strategy that you could use to solve the problem?

The above questions can be used with **short response** and **constructed response** also. Other questions to consider when prompting students to verbalize or justify their thinking are:

**Monitoring as students work:**
- What is the problem asking you to find?
- How would/did you start the problem?
- What else do you need to do?

**During debriefing:**
- What did the problem ask you to do?
- What information do you see in the problem?
- What did you do first to solve this problem?
- Who else started this same way?
- What did you do next?
- Who started a different way?
- What are some strategies that you heard today that you would like to try when solving a similar problem in the future?

**Answer Key:**

The information above is intended to help teachers get at student understanding of the mathematical idea(s) in each problem. Also provided is an Answer Key for each set of items. The Answer Key provides more information on the expected student response for each item, as well as the standard being addressed. While it is important for students to get the answer right, it is equally important for them to understand how their thinking leads or does not lead to a correct solution. Incorrect solutions set the stage for teachable moments!!!!
1. An amusement park has games, rides, and shows.
   - The total number of games, rides, and shows is 70.
   - There are 34 rides.
   - There are two times as many games as shows.

How many games are there? ___________________
How many shows are there? ___________________

Use numbers, words, or drawings to show how you got your answer.

2. What number is 10,000 more than 333,333?
   A. 333,433
   B. 334,333
   C. 343,333
   D. 433,333

3. David has 19 boxes. Each box has 135 golf balls in it.
   a. How many golf balls are there in all?
   b. If David has 5 larger boxes and he wants to separate all the golf balls equally, how many golf balls should go into each of the 5 boxes?

   Show all your work.
1. A whole number is multiplied by 5. Which of these could be the result?

   A) 652  
   B) 562  
   C) 526  
   D) 265

2. The worker at a ticket office sold 4920 tickets for the Thursday performance of a play and 3879 for the Friday performance. How many more tickets were sold for the Thursday performance than for the Friday performance?

   Answer:

3. Mr. Jones picked a number greater than 100.

   He told Gloria to divide the number by 18.

   He told Edward to divide the number by 15.

   Whose answer is greater?

   ☐ Gloria's  ☐ Edward's

   Explain how you know this person's answer will always be greater for any number that Mr. Jones picks.

1. The difference between 85 and 53 is 32. Meredith added some number to 85 and then added the same number to 53. What would be the difference between the two new numbers?

A) More than 32
B) Less than 32
C) 32
D) It depends on the number added to 85 and 53.

2. Sam can purchase his lunch at school. Each day he wants to have juice that costs 50¢, a sandwich that costs 90¢, and fruit that costs 35¢. His mother has only $1.00 bills. What is the least number of $1.00 bills that his mother should give him so he will have enough money to buy lunch for 5 days?

Answer:

3. Write a three-digit number using the digits 2, 4, and 6 so that the digit 4 means four tens and the digit 6 means six hundreds.

Answer: _________________________

Round your answer to the nearest hundred: ___________________

Round your answer to the nearest ten: _________________
1. On the road shown above, the distance from Bay City to Exton is 60 miles. What is the distance from Bay City to Yardville?

A) 45 miles  
B) 75 miles  
C) 90 miles  
D) 105 miles

2. Two whole numbers, each greater than 2, are multiplied together. The product is 126. What could the two numbers be?

_______ and ________

3. Jill needs to earn $45 for a class trip. She earns $2 each day on Mondays, Tuesdays, and Wednesdays, and $3 each day on Thursdays, Fridays, and Saturdays. She does not work on Sundays. How many weeks will it take her to earn $45? Use words or drawings.
Show all your work:

1. A whole number is multiplied by 3. Which of these could be the result?

   A) 759  
   B) 869  
   C) 663  
   D) 569

2. The worker at a movie ticket office sold 5439 tickets for the Friday showings of Spiderman and 2619 for the Saturday showings. How many more tickets were sold for the Friday showings than for the Saturday showings?

   Answer:

3. Write a four-digit number using the digits 8, 2, 4, and 6 so that the digit 8 means eight tens, the digit 6 means six thousands, and the digit 2 means two ones.

   Answer: _________________________

   Round your answer to the nearest hundred: ___________________

   Round your answer to the nearest ten: ____________________

Standard #9
1. Solution:

70-34=36 so there are 36 shows and games.

The number of games is twice the number of shows; there must be 24 games and 12 shows.

Standard #9
2. Solution: C. 343,333

Standard #10
3. Solution(s):
   a. To find the total number of balls in all, I multiplied 135 and 19 to get 2565.
      
      OR
      
      135 \times 19 = 2565 \text{ balls.}

   b. To separate all the balls equally, then divide. 2565 \div 5 = 513. Devon would put 513 balls in each box.

Number and Operations in Base Ten  ANSWER KEY  DAY 2

Standards #10 and OA #3
1. D.

Standard #9
2. 1041

Standard #11
3. Solution:

Correct oval: Edward's

Explanation:

Dividing by a smaller number gives a greater answer.

OR

Dividing by a larger number gives a smaller answer.

OR

A smaller number goes into another number more times.
Standard #9
1.  C.

Standard #9
2.  Solution:
   For 1 day, the sum is $1.75. For 5 days, the sum is $8.75. Therefore, he should ask his
   mother for nine one-dollars bills (or one $5 bill and four $1 bills).

   Answer may be given pictorially.

   In this question a student needed to add together the cost of a juice, the cost of a sandwich,
   and the cost of a piece of fruit for one day. The total cost for lunch each day is $1.75. Once
   the total is found for each day, the student needs to multiply the total for each day by 5 days.
   This gives a total for the week of $8.75. The least number of dollar bills that Sam's mother
   needs to give him is 9. The question presented students with an opportunity to demonstrate
   their understanding of money in a real-world situation.

Standards #7 and #8
3.  Answer:  642
   Round to the nearest hundred:  600
   Round to the nearest ten:  640

Number and Operations in Base Ten       ANSWER KEY       DAY 4

Standard #9
1.  D.

Standards #10 and OA #3
2.  Solution:

   Any one of these pairs:
   3, 42
   6, 21
   7, 18
   9, 14

   In this question the student was asked to write 126 as the product of two whole numbers,
   each of which is greater than 2. The student was required only to identify one of several
   possible factorizations of 126 for credit. Students were permitted to use a calculator.

Standard #9
3.  Correct answer is:  3 weeks
   weekly: 2+2+2+3+3+3 = $15
Standards #10 and OA #3
1. A. and C.

Standard #9
2. 2820

\[ 5439 - 2619 = 2820 \]

Standards #7 and #8
3. Answer: 6,482

Round to the nearest hundred: 6,500
Round to the nearest ten: 6,480