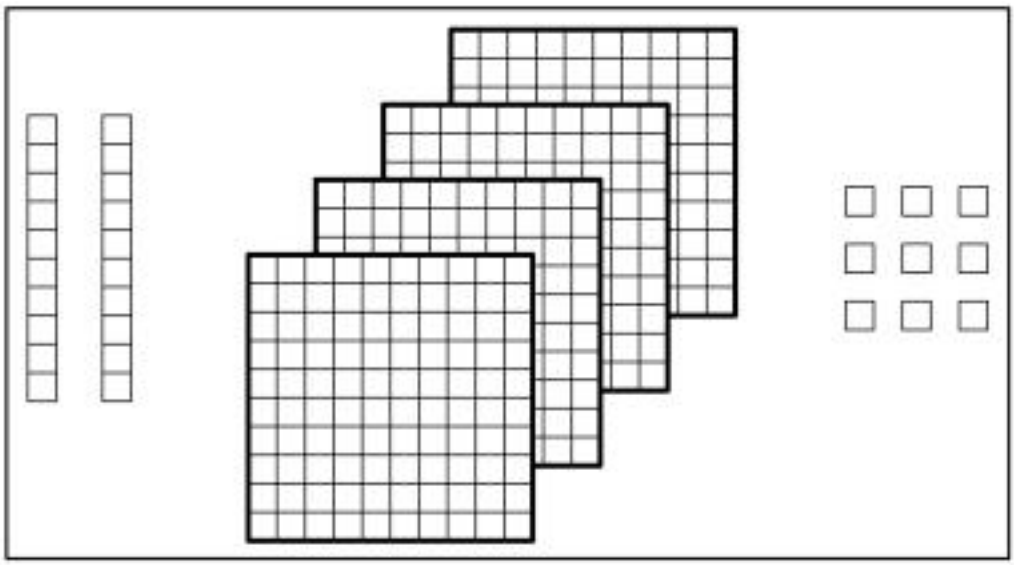
NAEP Released Items Aligned to the Iowa Core

2.NBT.1 Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:

a. 100 can be thought of as a bundle of ten tens — called a "hundred."
b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).



Each small square ( ) above is equal to 1. There are 10 small squares in each strip. There are 100 small squares in each large square. What number is shown?

A. 4,029
B. 492
C. 429
D. 249

2003-4-10-6

Source: National Assessment of Educational Progress, 2003, Grade 4 Mathematics Assessment.

What number is 10 MORE than 95?

2004-9-23-13

Source: National Assessment of Educational Progress, 2004, Age 9 Mathematics Assessment.

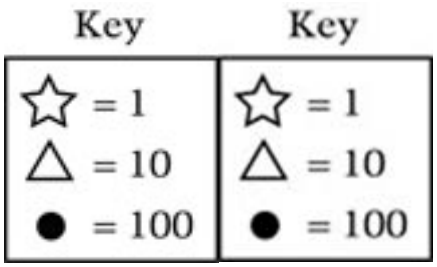
What is the difference between the smallest positive 3-digit number and the largest positive 2-digit number?

A. l
B. 9
C. 10
D. 90
E. 900

1992-8-12-3
1992-12-12-3

Source: National Assessment of Educational Progress, 1992, Grade 8 and Grade 12 Mathematics Assessments.

2.NBT.2 Count within 1000; skip-count by 5s, 10s, and 100s.



Based on the key above, which of these equals 352?

A.

B.

C.

D.

2007-4-11-2

Source: National Assessment of Educational Progress, 2007, Grade 4 Mathematics Assessment.

2.NBT.3 Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.

2.NBT.4 Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons.

Which statement is true?

A. 352 > 759
B. 442 > 436
C. 518 > 819
D. 883 < 794

1990-4-9-2

Source: National Assessment of Educational Progress, 1990, Grade 4 Mathematics Assessment.

2.NBT.5 Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

While Adisha's parents were looking for a car, Adisha counted the number of cars and trucks in the lot of the sales office.

She counted:

25 New cars
16 Used cars
59 Trucks

How many more trucks than cars are there on the lot?

Write directions for how to use the calculator to solve this problem.

2011-4-8-17

Source: National Assessment of Educational Progress, 2011, Grade 4 Mathematics Assessment.

Tanika wrote 100 in four different ways.

85 + 15	70 + 30
141 – 41	102 - 2

Write 100 in four other ways. Do not use the numbers that Tanika used.

1. _____
2. _____
3. _____
4. _____

2011-4-9-4 (Adapted)

Source: National Assessment of Educational Progress, 2011, Grade 4 Mathematics Assessment.

Add.

$$\begin{array}{r} 35 \\ +42 \\ \hline \end{array}$$

2004-9-23-4
2004-13-23-3

Source: National Assessment of Educational Progress, 2004 Age 9 and Age 13 Mathematics Assessments.

Add.

$$\begin{array}{r} 55 \\ +37 \\ \hline \end{array}$$

2004-9-23-5
2004-13-23-4

Source: National Assessment of Educational Progress, 2004 Age 9 and Age 13 Mathematics Assessments.

2.NBT.6 Add up to four two-digit numbers using strategies based on place value and properties of operations.

Add:

$$\begin{array}{r} 38 \\ 74 \\ 66 \\ +75 \\ \hline \end{array}$$

2008-9-21-9
2008-13-21-9

Source: National Assessment of Educational Progress, 2008, Age 9 and Age 13 Mathematics Assessments.

Add.

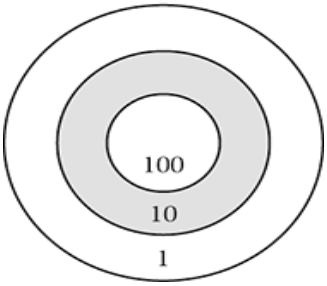
$$\begin{array}{r} 59 \\ 46 \\ 82 \\ +68 \\ \hline \end{array}$$

2004-9-23-6
2004-13-23-5

Source: National Assessment of Educational Progress, 2004, Age 9 and Age 13 Mathematics Assessments.

2.NBT.7 Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.

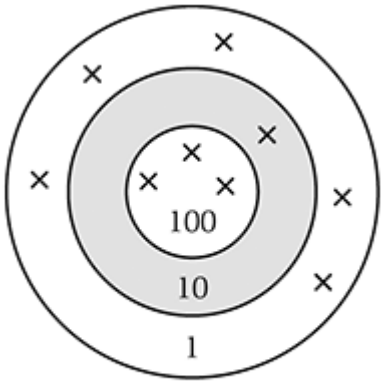
Dartboard



A dartboard has three separate areas.

Darts that land in the inner circle earn 100 points each.
Darts that land in the middle ring earn 10 points each.
Darts that land in the outer ring earn 1 point each.

Jill threw 9 darts. Each X marks a spot where one of Jill's darts landed. What was Jill's score?

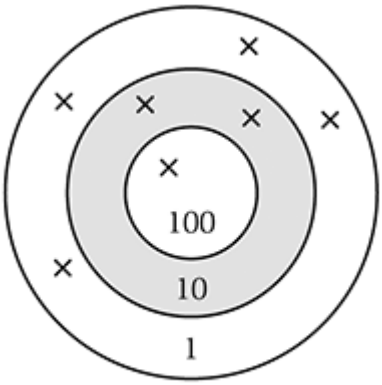


Jill's Turn

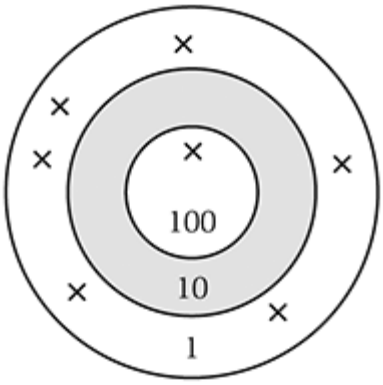
Answer: _____ points

Kevin threw 7 darts, and they landed as shown. He has 2 more darts to throw.

Ruth threw 7 darts, and they landed as shown. She has 2 more darts to throw.



Kevin's Turn



Ruth's Turn

The person who has the highest score after throwing 9 darts wins the game.

Can Jill win the game?	◯ Yes	◯ No
Can Kevin win the game?	◯ Yes	◯ No
Can Ruth win the game?	◯ Yes	◯ No

Explain how you know which players can win and which players cannot win.

2011-4-9-16

Source: National Assessment of Educational Progress, 2011, Grade 4 Mathematics Assessment.

$$\begin{array}{r} 301 \\ \underline{-\ 75} \end{array}$$

A. 226
B. 235
C. 236
D. 374

2009-4-10-1

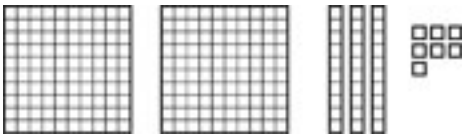
Source: National Assessment of Educational Progress, 2009, Grade 4 Mathematics Assessment.

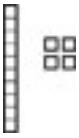
On Saturday 789 people went to the zoo. On Sunday 983 people went to the zoo. How many more people went to the zoo on Sunday than on Saturday?

A. 194
B. 204
C. 206
D. 1,772

2007-4-7-2

Source: National Assessment of Educational Progress, 2007, Grade 4 Mathematics Assessment.



The figure above represents 237. Which number is  more than 237?

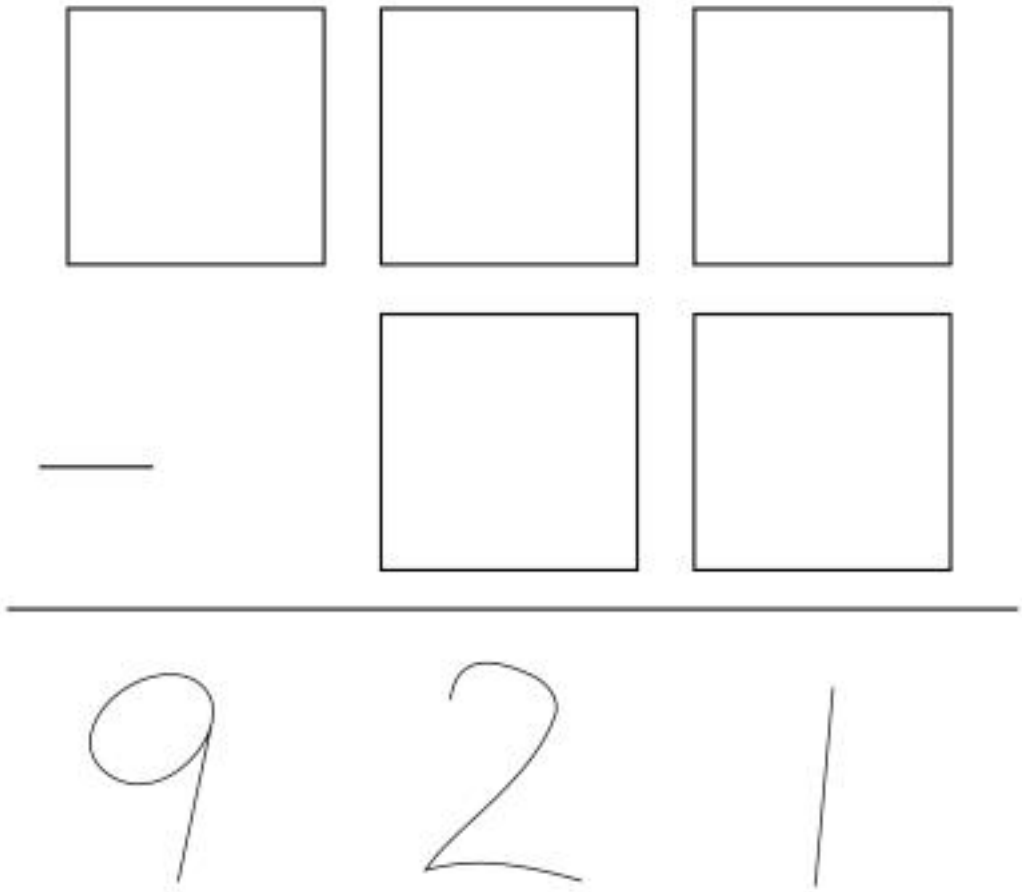
A. 244
B. 249
C. 251
D. 377

2007-4-11-7

Source: National Assessment of Educational Progress, 2007, Grade 4 Mathematics Assessment.

Audrey used number tiles with the digits 2, 3, 4, 6, and 9. She placed one tile in each box below so the difference was 921.

Write the numbers in the boxes below to show where Audrey placed the tiles.



2005-4-4-11

Source: National Assessment of Educational Progress, 2005, Grade 4 Mathematics Assessment.

The band members have a goal to sell 625 candy bars. If they have sold 264 so far, how many more candy bars do they have to sell to reach their goal?

2003-4-10-9

Source: National Assessment of Educational Progress, 2003, Grade 4 Mathematics Assessment.

2.NBT.8 Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.

2.NBT.9 Explain why addition and subtraction strategies work, using place value and the properties of operations.