

# North Carolina EOG 2018 Grade 4 Math

Exam Materials

Pages 2 - 25

Answer Key Materials

Pages 26 - 27

# Released Items

Published January 2019

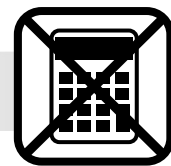
## **Grade 4 Mathematics North Carolina End-of-Grade Assessment**



**Public Schools of North Carolina**

Department of Public Instruction | State Board of Education

Division of Accountability Services/North Carolina Testing Program



## Sample Questions

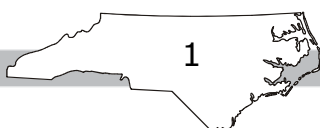
S1 Which number is the smallest?

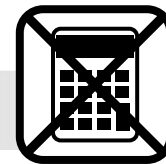
- A 51
- B 62
- C 73
- D 84

S2 What is  $3 + 4$ ?

- A 5
- B 6
- C 7
- D 8

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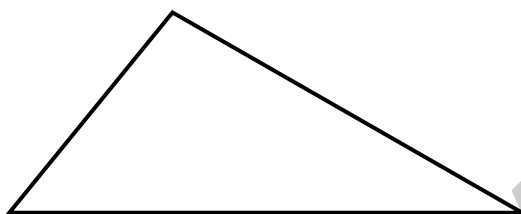


- 1 There are 594 children participating in a county science fair. They are put into groups of six children. How many groups will participate?

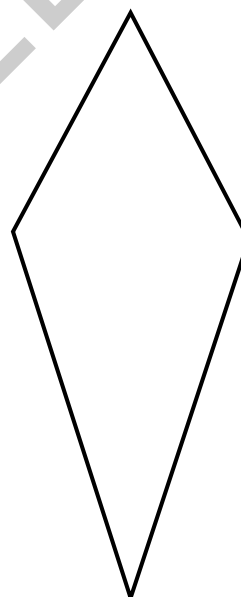
A 60  
B 98  
C 99  
D 150

- 2 Which figure has **at least** one acute angle, one obtuse angle, and one right angle?

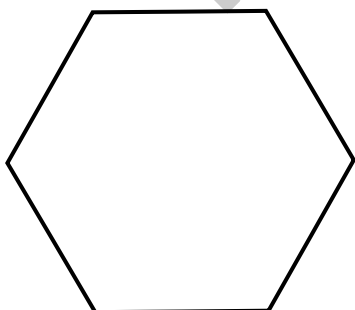
A



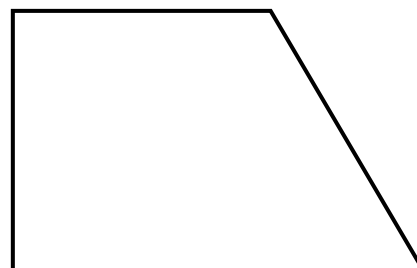
B

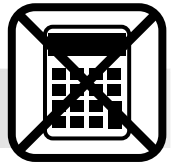


C



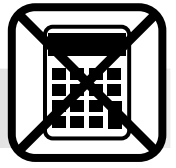
D





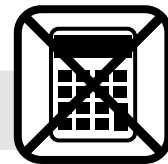
- 3 Each day of the work week, Mr. Harbin uses  $\frac{3}{4}$  of a gallon of gas. Which estimate **best** describes the amount of gas Mr. Harbin would use in a five-day work week?
- A less than one gallon
  - B between 2 and 3 gallons
  - C between 3 and 4 gallons
  - D more than 4 gallons
- 4 The body and head of a fox measure  $19\frac{4}{5}$  inches, and its tail measures  $10\frac{4}{5}$  inches. What is the total length of the fox?
- A  $30\frac{8}{10}$  inches
  - B  $30\frac{3}{5}$  inches
  - C  $29\frac{8}{10}$  inches
  - D  $29\frac{3}{5}$  inches





- 5 There are 136 students in the school cafeteria. There are 8 students sitting at each table. How many tables are in the cafeteria?
- A 12 tables
  - B 16 tables
  - C 17 tables
  - D 18 tables
- 6 Which list contains **exactly** 2 prime numbers and 2 composite numbers?
- A 13, 14, 15, 16
  - B 2, 4, 5, 6
  - C 7, 8, 9, 10
  - D 25, 26, 27, 29
- 7 A cafeteria manager ordered 1,251 cartons of milk on Monday.
- He also ordered cartons of milk on Thursday.
  - He ordered 879 more cartons on Monday than on Thursday.
- How many cartons did the manager order on Thursday?
- A 372
  - B 428
  - C 1,628
  - D 2,130





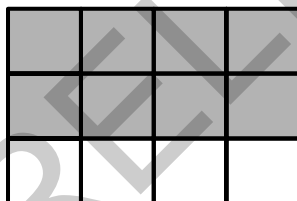
8 Dana ran on Monday and Tuesday.

- She ran  $5\frac{2}{10}$  km on Monday.
- She ran  $4\frac{6}{100}$  km on Tuesday.

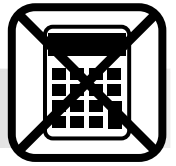
How far did Dana run altogether?

- A  $9\frac{8}{10}$  km
- B  $9\frac{8}{100}$  km
- C  $9\frac{6}{10}$  km
- D  $9\frac{26}{100}$  km

9 What fraction is shaded in each of these models?



- A  $\frac{2}{3}$
- B  $\frac{3}{4}$
- C  $\frac{2}{6}$
- D  $\frac{4}{8}$



- 10 A group of friends were each completing a project of the same size. This table shows how much of the project each friend has completed.

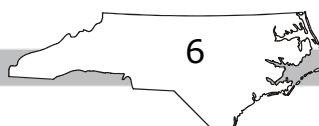
Name	Fraction of Project
Michael	$\frac{2}{3}$
James	$\frac{1}{2}$
Leilani	$\frac{6}{8}$
Soumi	$\frac{4}{6}$

Which friends have completed an **equal** amount of their project?

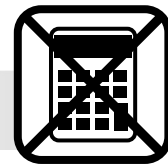
- A Michael and Soumi
  - B James and Soumi
  - C James and Leilani
  - D Michael and Leilani
- 11 Pablo was getting ready for a bike race.
- He rode his bike each day for 32 days.
  - He rode his bike for 45 minutes each day.

How many minutes did Pablo spend riding his bike to get ready for the race?

- A 288
- B 1,360
- C 1,431
- D 1,440



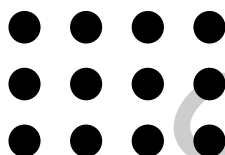




- 12 There are twice as many women on a bus as there are men. There are 24 women on the bus. What is the total number of men and women on the bus?

A 12  
B 36  
C 48  
D 72

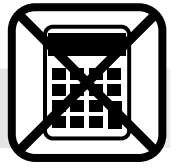
- 13 Patrick made 12 cookies.



Patrick's sister will eat 4 of the cookies. What fraction of the cookies will be left?

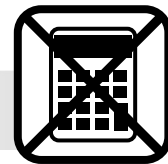
A  $\frac{1}{4}$   
B  $\frac{1}{3}$   
C  $\frac{2}{3}$   
D  $\frac{3}{4}$





- 14 Each classroom at a school has 24 desks. There are 18 classrooms in the school. How many desks are at the school?
- A 444 desks
  - B 432 desks
  - C 424 desks
  - D 402 desks
- 15 Four friends each ate  $\frac{2}{3}$  of an apple. How many apples did the four friends eat in all?
- A  $\frac{8}{12}$  of an apple
  - B  $\frac{6}{7}$  of an apple
  - C 2 apples
  - D  $2\frac{2}{3}$  apples
- 16 A farmer has an equal number of cows in 3 different fields on his farm. Which choice could be the total number of cows?
- A 112
  - B 178
  - C 207
  - D 266

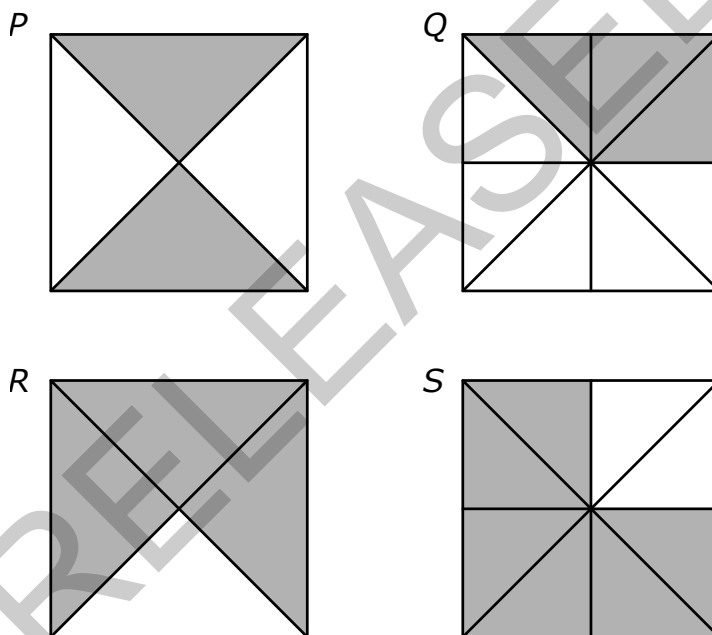




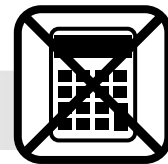
- 17 There are 128 pencils to be put into boxes. Each box can hold 9 pencils. How many boxes can be completely filled?

A 14  
B 15  
C 104  
D 105

- 18 Which two of these squares have the same amount shaded?



A *P* and *Q*  
B *P* and *S*  
C *Q* and *R*  
D *R* and *S*



- 19 A farmer has 348 apples and wants to put them into baskets. He will put 6 apples into each basket. How many baskets will the farmer use?

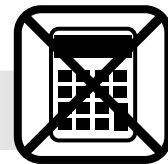
A 56  
B 57  
C 58  
D 59

- 20 Maria is making a snack mix. For the recipe, she needs:

- $\frac{2}{4}$  cup peanuts
- $\frac{1}{4}$  cup raisins
- $\frac{2}{4}$  cup chocolate chips

Maria will double the recipe. What is the total amount of peanuts, raisins, and chocolate chips she will need?

A  $\frac{5}{12}$  cup  
B  $\frac{10}{8}$  cups  
C  $\frac{9}{4}$  cups  
D  $\frac{10}{4}$  cups



**This is the end of the calculator inactive test questions.**

**Directions:**

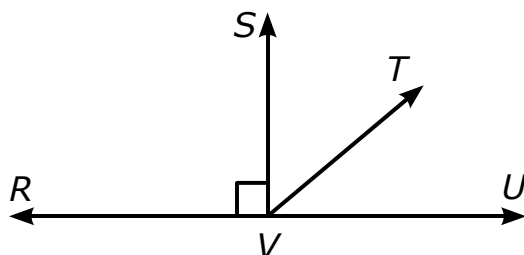
- 1. Look back over your answers for the calculator inactive questions. You will not be able to go back and work on these questions once you are given a calculator.**
- 2. Raise your hand to let your teacher know you are ready to begin the calculator active test questions.**
- 3. Do not begin work on the calculator active test questions until your teacher has given you a calculator.**

RELEASED





- 21  $RVU$  is a straight line and  $\angle TVU$  has a measure of  $40^\circ$  in this figure.



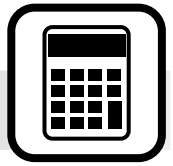
What is the measure of  $\angle SVT$ ?

- A  $40^\circ$
  - B  $45^\circ$
  - C  $50^\circ$
  - D  $90^\circ$
- 22 Michael is solving  $23 \times 42$  using this rectangular array.

800	?
40	6

What is the missing number Michael needs to solve this problem?

- A 12
- B 43
- C 70
- D 120



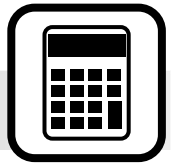
- 23 Which group of numbers includes **only** composite numbers?
- A 3, 9, 15, 27, 31
  - B 12, 15, 21, 28, 31
  - C 15, 18, 21, 24, 25
  - D 21, 28, 31, 35, 41
- 24 Which choice is equal to 462?
- A 3 hundreds, 16 tens, and 2 ones
  - B 3 hundreds, 6 tens, and 2 ones
  - C 4 hundreds and 62 tens
  - D 4 hundreds, 60 tens, and 2 ones
- 25 A tree was  $14\frac{3}{8}$  inches tall when it was first planted. Two years later, the tree was  $21\frac{1}{8}$  inches tall. How much did the tree grow in the two years?
- A  $6\frac{5}{8}$  inches
  - B  $6\frac{6}{8}$  inches
  - C  $7\frac{5}{8}$  inches
  - D  $7\frac{6}{8}$  inches



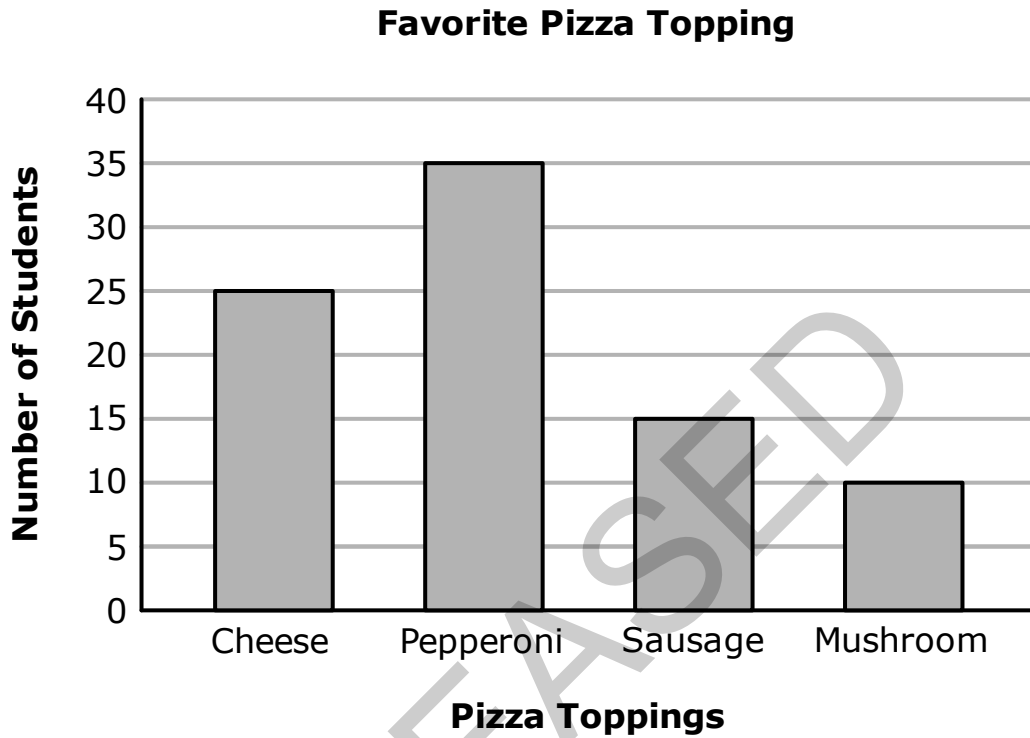
- 26 Wendy filled a bucket with vegetables from her garden. The vegetables weighed 7,000 grams. She sold 4,200 grams of the vegetables. How much did the remaining vegetables weigh?
- A 2,800 grams
  - B 3,200 grams
  - C 4,193 grams
  - D 11,200 grams

RELEASED



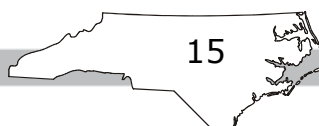


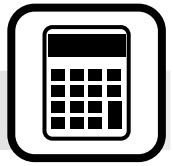
- 27 Fourth-grade students were surveyed about their favorite pizza topping. This graph shows the results.



How many more fourth-graders chose pepperoni or sausage than chose the other toppings?

- A 5
- B 10
- C 15
- D 20

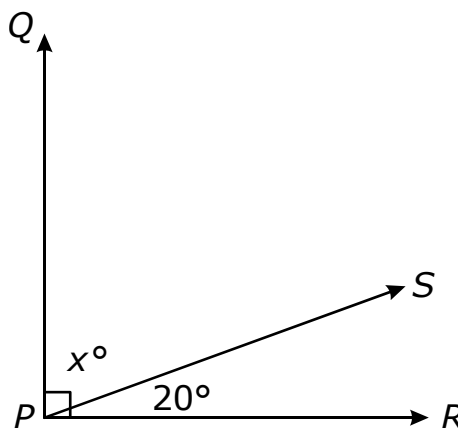




- 28 Last week, Jeff read 8 pages of his book. This week, he has read 6 times as many pages as last week. How many pages has Jeff read altogether during the two weeks?
- A 14
  - B 40
  - C 48
  - D 56
- 29 Which polygon can have four sides of equal length, two pairs of parallel sides, and no right angles?
- A rectangle
  - B trapezoid
  - C rhombus
  - D square
- 30 Maria drank 3 liters of water last week. Her friend drank twice as much water as Maria. How many milliliters of water did they both drink?
- A 3,000 milliliters
  - B 5,000 milliliters
  - C 6,000 milliliters
  - D 9,000 milliliters



- 31 Rays  $PQ$  and  $PR$  are perpendicular.



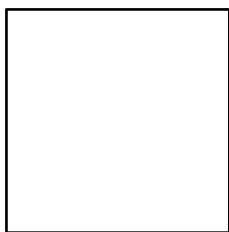
What is the value of  $x$ ?

- A 40
  - B 70
  - C 80
  - D 110
- 32 Thomas lives more than 0.55 km and less than 0.75 km from his school. Which choice could be the distance Thomas lives from his school?
- A 0.06 km
  - B 0.50 km
  - C 0.60 km
  - D 1.30 km

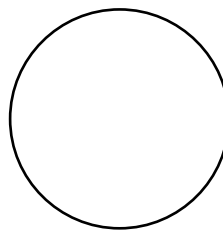


33 Which figure has the most lines of symmetry?

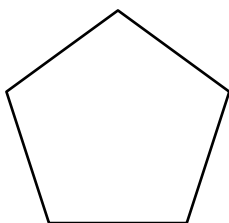
A



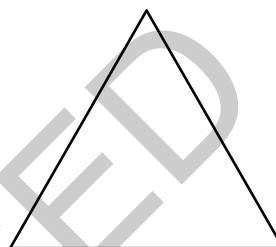
B



C



D



34 If this pattern continues, what will the next 3 numbers be?

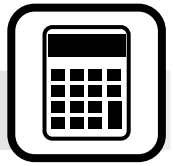
10, 15, 25, 40, 60, \_\_\_\_, \_\_\_\_, \_\_\_\_

A 65, 70, 75

B 85, 110, 135

C 85, 115, 150

D 90, 120, 155



- 35 Every Saturday morning, Jack reads for 30 minutes, plays basketball for 60 minutes, and rides his bike. If Jack starts these activities at 10:25 a.m. and finishes them at 12:10 p.m., how long does he spend riding his bike?

A 5 minutes  
 B 15 minutes  
 C 25 minutes  
 D 45 minutes

- 36 Which number sentence could be used to solve this problem?

$$2\frac{3}{5} - 1\frac{1}{5} = x$$

A  $\frac{5}{5} - \frac{2}{5} = x$   
 B  $\frac{6}{5} - \frac{1}{5} = x$   
 C  $\frac{10}{5} - \frac{7}{5} = x$   
 D  $\frac{13}{5} - \frac{6}{5} = x$



- 37 Kathy has a garden that is 15 feet wide and 20 feet long. She will plant 1 bulb per square foot. Each bag of bulbs contains 9 bulbs. How many bags does Kathy need to buy?

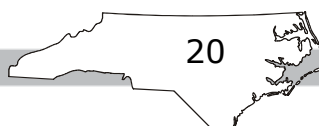
A 34 bags  
B 33 bags  
C 12 bags  
D 11 bags

- 38 This table shows the number of students at a school in the years 2014–2016.

Year	Number of Students
2014	1,030
2015	?
2016	1,300

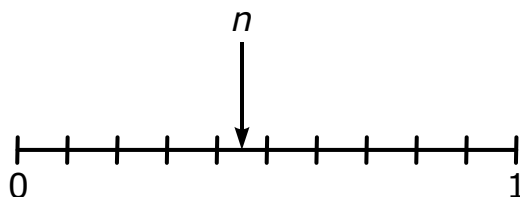
In 2015, there were more students than in 2014 but fewer than in 2016. Which could be the number of students in 2015?

A 1,003 students  
B 1,033 students  
C 1,303 students  
D 1,330 students



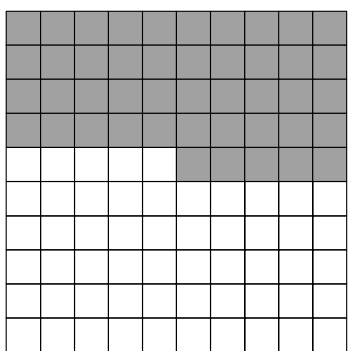


- 39 Marcy saw this number line in class.

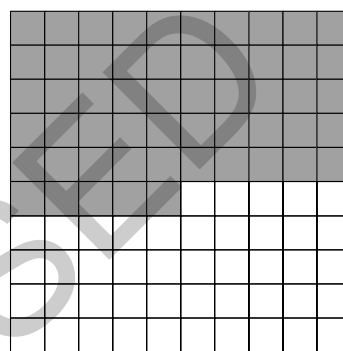


Which shaded section has the same value as  $n$ ?

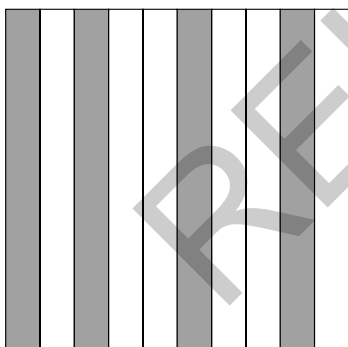
A



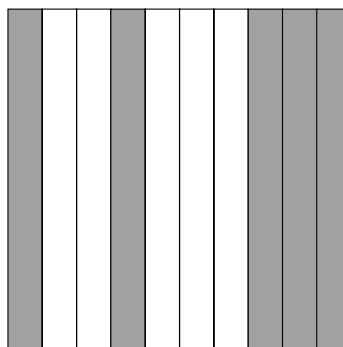
B



C



D





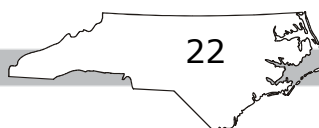
40 There are 1,829 students at a middle school.

- 568 students are in 6th grade.
- 629 students are in 7th grade.
- The rest of the students are in 8th grade.

How many students are in 8th grade?

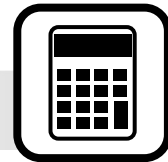
- A 622 students
- B 632 students
- C 772 students
- D 1,197 students

RELEASED



Go to the next page.

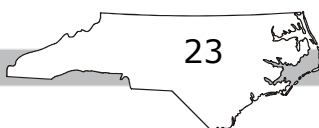


**Directions:**

**This is the end of the mathematics test.**

- 1. Put all of your papers inside your test book and close your test book.**
- 2. Place your calculator on top of the test book.**
- 3. Stay quietly in your seat until your teacher tells you that testing is finished.**

RELEASED



# GRADE 4 MATHEMATICS—RELEASED

## Grade 4 Mathematics RELEASED Form 2018–2019 Answer Key

Item Number	Type	Key	DOK	Domain
S1	MC	A		
S2	MC	C		

### Calculator Inactive

Item Number	Type	Key	DOK*	Domain
1	MC	C	1	NC.4.NBT.6
2	MC	D	1	NC.4.G.2
3	MC	C	2	NC.4.NF.4
4	MC	B	2	NC.4.NF.3
5	MC	C	1	NC.4.NBT.6
6	MC	B	1	NC.4.OA.4
7	MC	A	2	NC.4.NBT.4
8	MC	D	1	NC.4.NF.6
9	MC	A	2	NC.4.NF.1
10	MC	A	2	NC.4.NF.2
11	MC	D	1	NC.4.NBT.5
12	MC	B	2	NC.4.OA.1
13	MC	C	2	NC.4.NF.1
14	MC	B	1	NC.4.NBT.5
15	MC	D	2	NC.4.NF.4
16	MC	C	3	NC.4.OA.3
17	MC	A	1	NC.4.NBT.6
18	MC	D	2	NC.4.NF.1

## GRADE 4 MATHEMATICS—RELEASED

Item Number	Type	Key	DOK	Domain
19	MC	C	1	NC.4.NBT.6
20	MC	D	2	NC.4.NF.3

**Calculator Active**



Item Number	Type	Key	DOK	Domain
21	MC	C	2	NC.4.MD.6
22	MC	D	2	NC.4.NBT.5
23	MC	C	1	NC.4.OA.4
24	MC	A	1	NC.4.NBT.2
25	MC	B	2	NC.4.NF.3
26	MC	A	2	NC.4.MD.1
27	MC	C	2	NC.4.MD.4
28	MC	D	2	NC.4.OA.3
29	MC	C	2	NC.4.G.2
30	MC	D	2	NC.4.MD.2
31	MC	B	1	NC.4.MD.6
32	MC	C	2	NC.4.NF.7
33	MC	B	2	NC.4.G.3
34	MC	C	2	NC.4.OA.5
35	MC	B	3	NC.4.MD.8
36	MC	D	1	NC.4.NF.3
37	MC	A	2	NC.4.MD.3
38	MC	B	2	NC.4.NBT.7
39	MC	A	2	NC.4.NF.6
40	MC	B	2	NC.4.NBT.4

**\*DOK:**

**1 = Recall**

**2 = Skill/Concept**

**3 = Strategic Thinking**