

North Carolina EOG 2018 Grade 4 Math

Exam Materials

Pages 2 - 25

Answer Key Materials

Pages 26 - 27

Released Items

Published January 2019

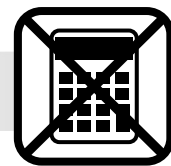
Grade 4 Mathematics North Carolina End-of-Grade Assessment



Public Schools of North Carolina

Department of Public Instruction | State Board of Education

Division of Accountability Services/North Carolina Testing Program



Sample Questions

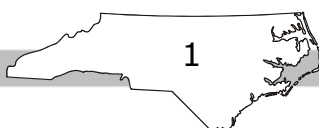
S1 Which number is the smallest?

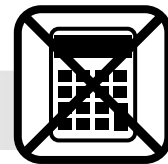
- A 51
- B 62
- C 73
- D 84

S2 What is $3 + 4$?

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

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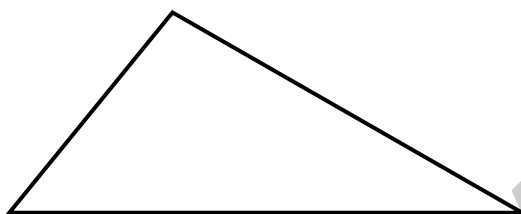


- 1 There are 594 children participating in a county science fair. They are put into groups of six children. How many groups will participate?

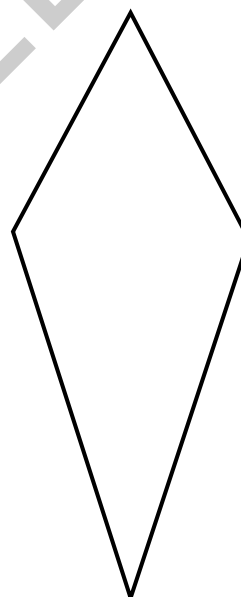
A 60
B 98
C 99
D 150

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

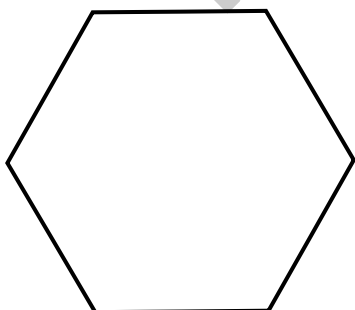
A



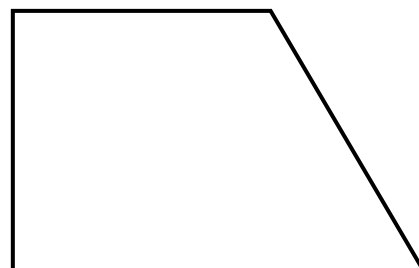
B

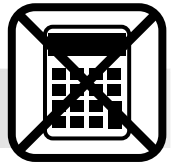


C

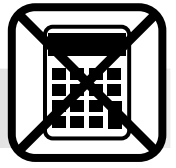


D



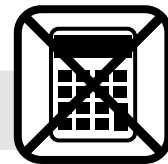


- 3 Each day of the work week, Mr. Harbin uses $\frac{3}{4}$ of a gallon of gas. Which estimate **best** describes the amount of gas Mr. Harbin would use in a five-day work week?
- A less than one gallon
 - B between 2 and 3 gallons
 - C between 3 and 4 gallons
 - D more than 4 gallons
- 4 The body and 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?

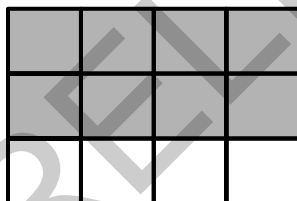
A $9\frac{8}{10}$ km

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?

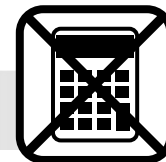


A $\frac{2}{3}$

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	$\frac{4}{6}$

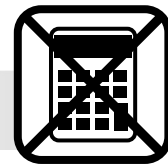
Which friends have completed an **equal** amount of their project?

- 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

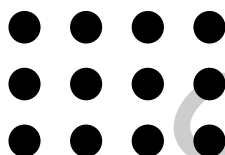




- 12 There are twice as many women on a bus as there are men. There are 24 women on the bus. What is the total number of men and women on the bus?

A 12
B 36
C 48
D 72

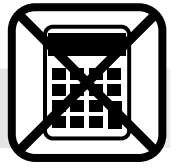
- 13 Patrick made 12 cookies.



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

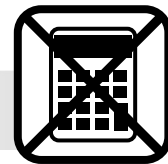
A $\frac{1}{4}$
B $\frac{1}{3}$
C $\frac{2}{3}$
D $\frac{3}{4}$





- 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

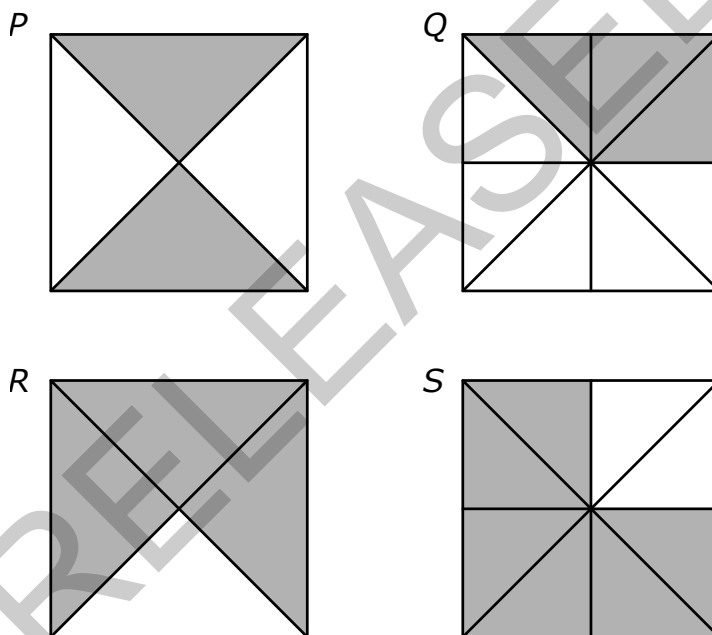




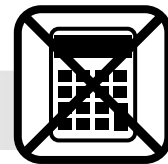
- 17 There are 128 pencils to be put into boxes. Each box can hold 9 pencils. How many boxes can be completely filled?

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?

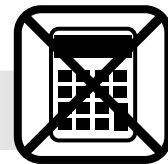
A 56
B 57
C 58
D 59

- 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:

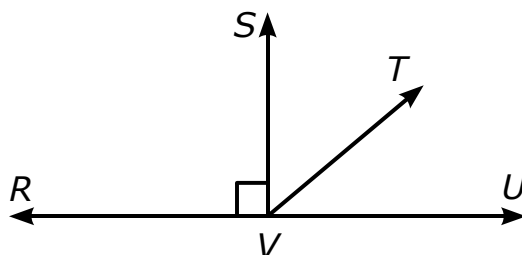
- 1. Look back over your answers for the calculator inactive questions. You will not be able to go back and work on these questions once you are given a calculator.**
- 2. Raise your hand to let your teacher know you are ready to begin the calculator active test questions.**
- 3. Do not begin work on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



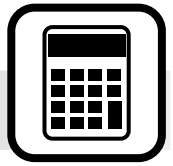
What is the measure of $\angle SVT$?

- A 40°
 - B 45°
 - C 50°
 - D 90°
- 22 Michael is solving 23×42 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

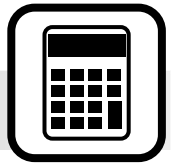


- 23 Which group of numbers includes **only** composite numbers?
- A 3, 9, 15, 27, 31
 - B 12, 15, 21, 28, 31
 - C 15, 18, 21, 24, 25
 - D 21, 28, 31, 35, 41
- 24 Which choice is equal to 462?
- A 3 hundreds, 16 tens, and 2 ones
 - B 3 hundreds, 6 tens, and 2 ones
 - C 4 hundreds and 62 tens
 - D 4 hundreds, 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

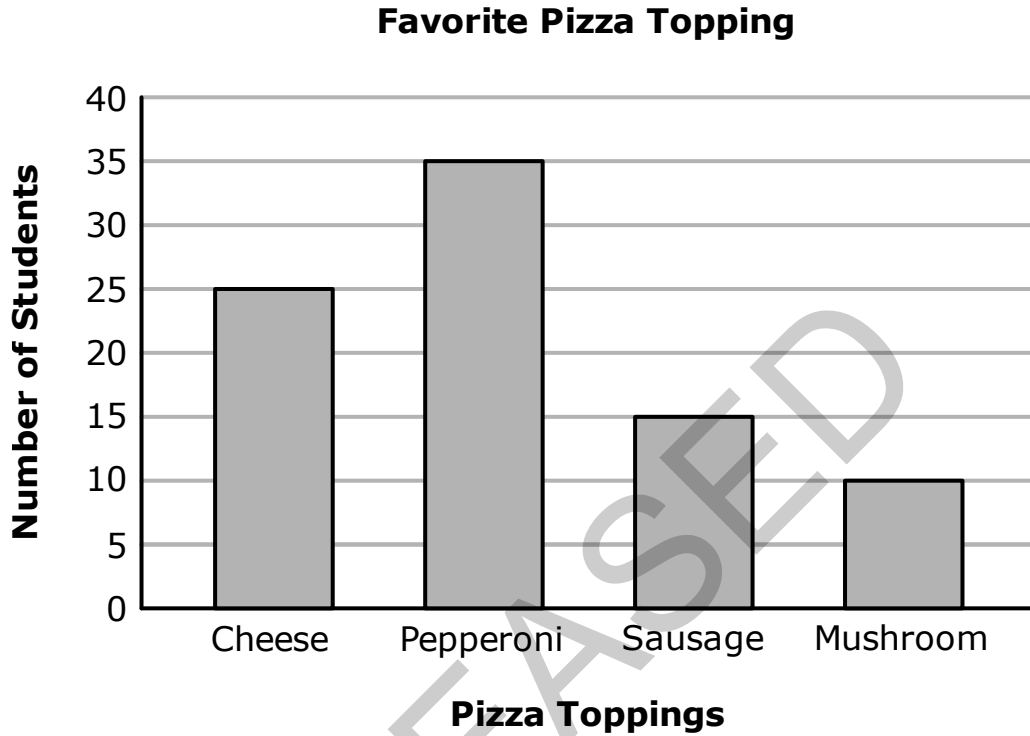


- 26 Wendy filled a bucket with vegetables from her garden. The vegetables weighed 7,000 grams. She sold 4,200 grams of the vegetables. How much did the remaining vegetables weigh?
- A 2,800 grams
 - B 3,200 grams
 - C 4,193 grams
 - D 11,200 grams

RELEASED

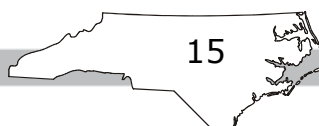


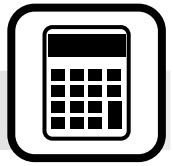
- 27 Fourth-grade students were surveyed about their favorite pizza topping. This graph shows the results.



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

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

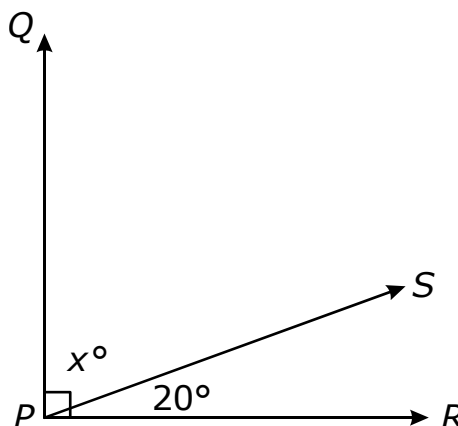




- 28 Last week, Jeff read 8 pages of his book. This week, he has read 6 times as many pages as last week. How many pages has Jeff read altogether during the two weeks?
- A 14
 - B 40
 - C 48
 - D 56
- 29 Which polygon can have four sides of equal length, two pairs of parallel sides, and no right angles?
- 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.



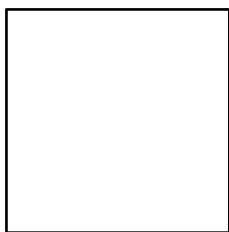
What is the value of x ?

- 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

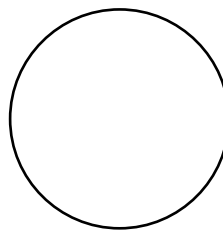


33 Which figure has the most lines of symmetry?

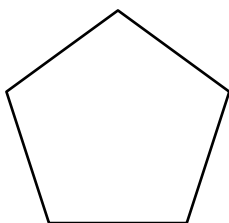
A



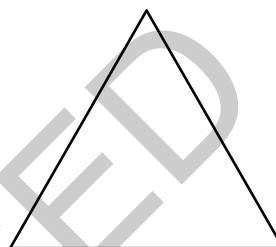
B



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?

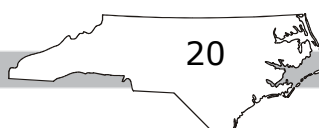
A 34 bags
B 33 bags
C 12 bags
D 11 bags

- 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

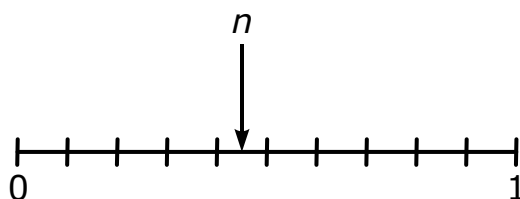
In 2015, there were more students than in 2014 but fewer than in 2016. Which could be the number of students in 2015?

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



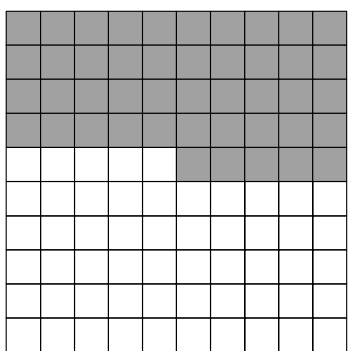


- 39 Marcy saw this number line in class.

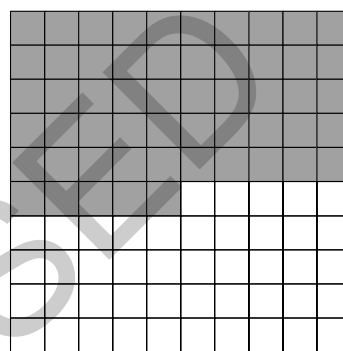


Which shaded section has the same value as n ?

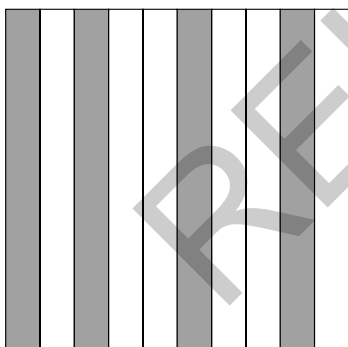
A



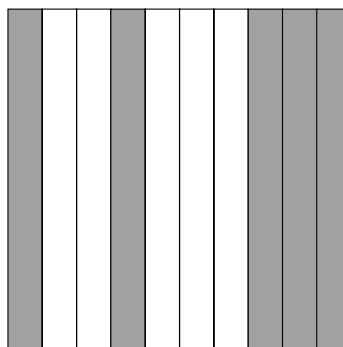
B



C



D





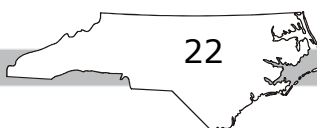
40 There are 1,829 students at a middle school.

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

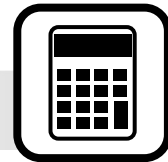
How many students are in 8th grade?

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

RELEASED



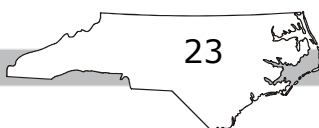
Go to the next page.

**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