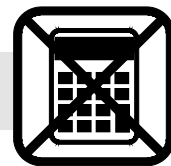# Released Items

Published January 2019

Grade 3 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
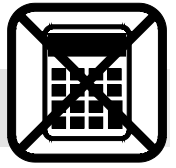
Sample Questions

S1   Which number is the smallest?
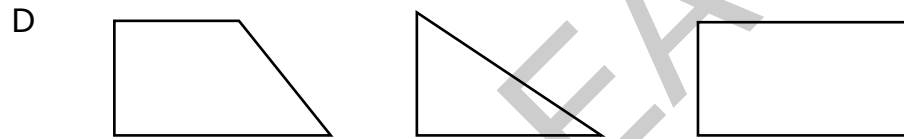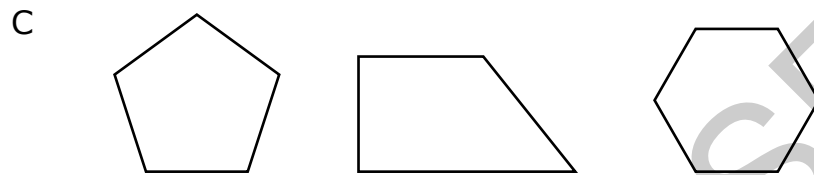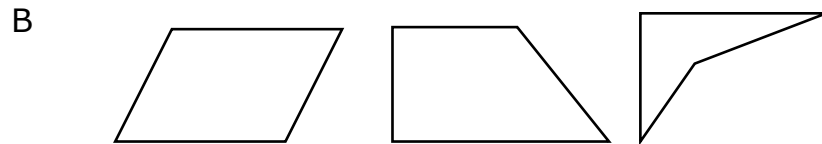
A   51

B   62

C   73

D   84

S2   What is 3 + 4?
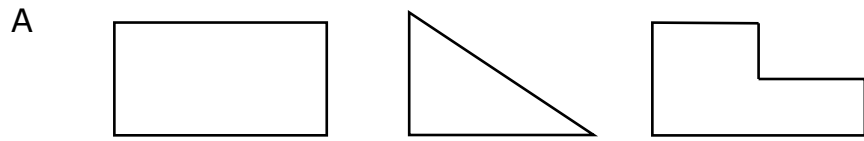
A   5

B   6

C   7

D   8

1   Which group of figures contains only quadrilaterals?

A

B

C

D

Go to the next page.
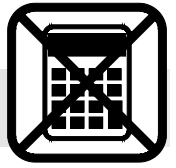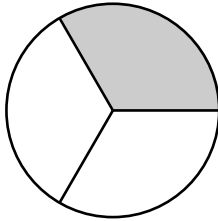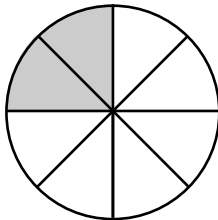
2   Which figure shows a shaded amount that is equivalent to the fraction $\frac{2}{6}$?
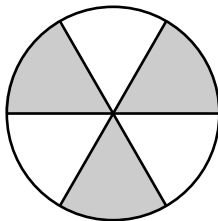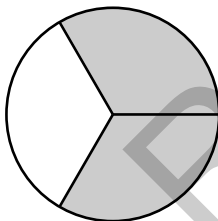
A

B

C

D

3   Which equation is true when $r = 7$?

A $6 = 30 \div r$

B $7 = 54 \div r$

C $7 = 49 \div r$

D $9 = 72 \div r$
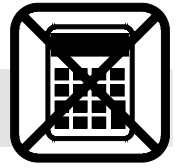
4   Vanessa spent 15 minutes in the library. She left the library at 11:30 a.m.

M   N   O   P

11:00 a.m.   11:30 a.m.   12:00 p.m.
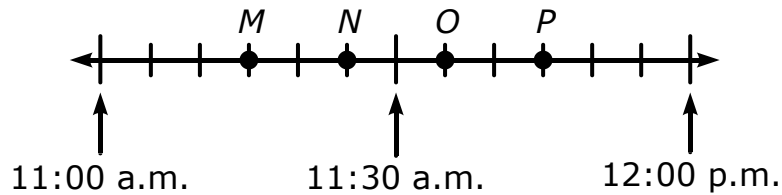
What letter on the number line represents the time Vanessa arrived at the library?

A   *M*

B   *N*

C   *O*

D   *P*

5   Jacquelyn's mom drove 265 miles on Thursday and 478 miles on Friday. She has 143 miles more to drive on Saturday. **About** how many miles will she drive in all?

A   700

B   800

C   900

D   1,000
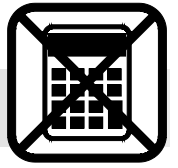
6   What fraction of this figure is shaded?

A $\frac{1}{4}$

B $\frac{1}{5}$

C $\frac{3}{4}$

D $\frac{2}{5}$
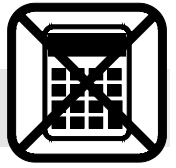
7   This figure is 4 units long and 4 units wide.
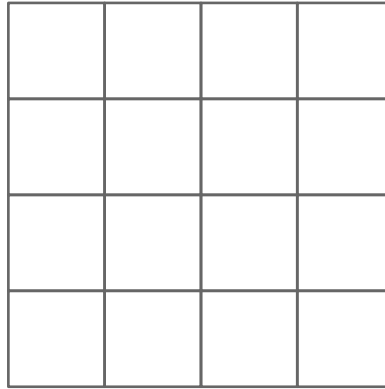
Which measurements describe a rectangle that has the same area as the figure?

A   5 units long and 3 units wide

B   8 units long and 2 units wide

C   10 units long and 6 units wide
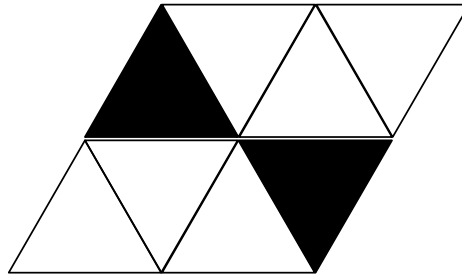
D   12 units long and 4 units wide

8   Each of the triangles below has three sides of equal length. In which choice does the triangle have $\frac{1}{6}$ of its area shaded?

A

B

C

D

Go to the next page.
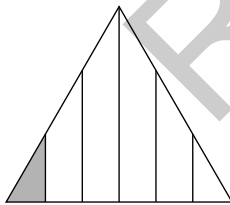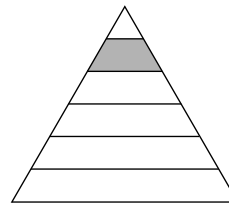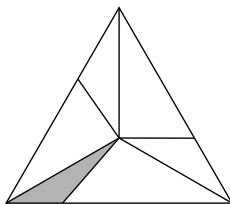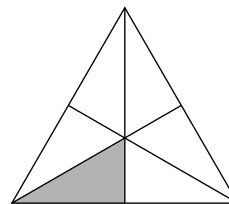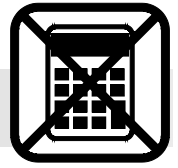
9   There are 500 seats in a movie theater. There are 362 people sitting in the seats. How many seats are empty?

   A   262 seats

   B   152 seats

   C   148 seats

   D   138 seats

10   Which figure could be added to the diagram to make it true?
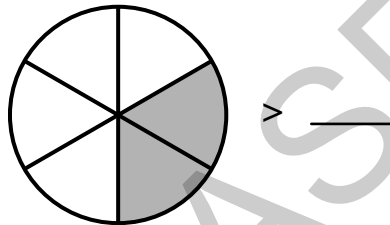
A
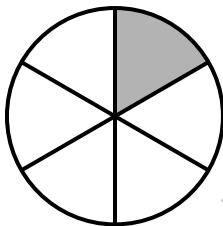
B
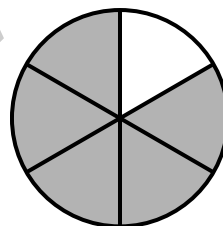
C
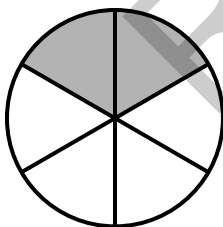
D
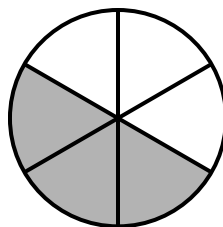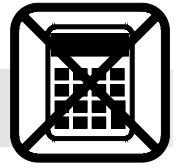
11 Sam's goal is to walk 36 miles.

- He walks 4 miles each day.
- He has walked for 6 days.

Which equation can be used to find how many more miles, *n*, Sam still needs to walk to reach his goal?

A $3 \times 5 + n = 36$

B $4 \times 6 + n = 36$

C $4 \times 6 \times n = 36$

D $9 \times 4 + n = 36$

12 Amy shaded some parts of this poster.

What fraction of the area of the poster is shaded?

A $\frac{2}{3}$

B $\frac{3}{8}$

C $\frac{5}{3}$

D $\frac{5}{8}$

Go to the next page.
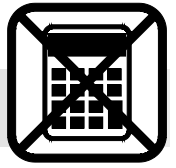
13   Eric leaves school at the time shown.
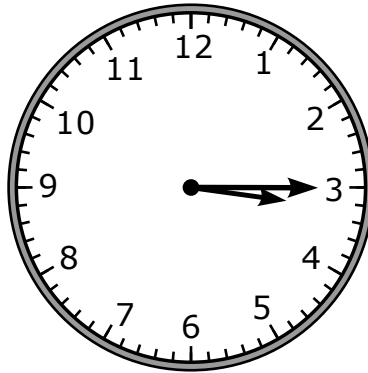
He arrives home 25 minutes later. At what time does Eric get home?

A   2:50

B   3:15

C   3:40

D   4:05

Go to the next page.
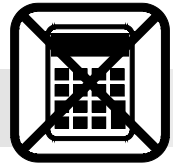
14   Which number line shows point *M* at $\frac{3}{8}$?

A

$\frac{1}{2}$ $\frac{6}{8}$

B

$\frac{1}{2}$ $\frac{6}{8}$

C

$\frac{1}{2}$ $\frac{6}{8}$

D

$\frac{1}{2}$ $\frac{6}{8}$
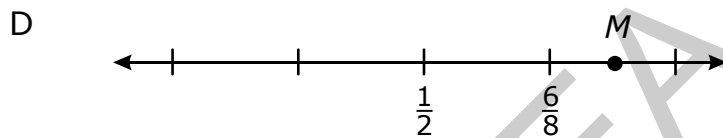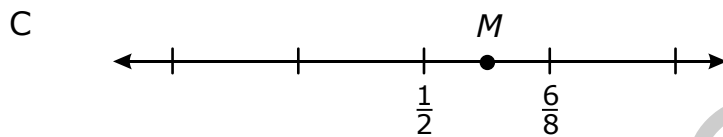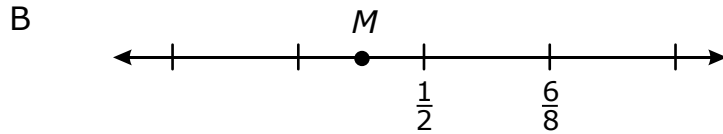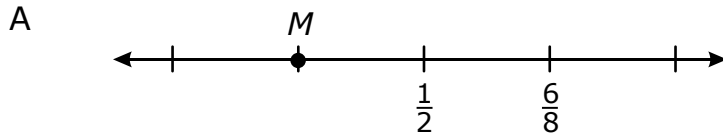
15   Chantelle has 56 stickers. She will give all of the stickers to 8 friends. Each friend will receive the same number of stickers. Which equation will help Chantelle decide how many stickers, *n*, to give to each friend?

A $n \div 8 = 56$

B $8 \times n = 56$

C $56 - n = 48$

D $56 - 8 = n$
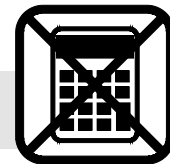
16 A farmer planted 5 different types of tomatoes. He planted 40 of each type. How many tomatoes did the farmer plant?

A   20

B   45

C   200

D   250

17 Daniel's goal is to walk 100 miles.

- He walks 5 miles every day.
- He has walked for 7 days.
- Daniel still needs to walk k more miles for his goal.

Which equation could be used to find how many more miles, k, Daniel will have to walk to meet his goal?

A $100 = 5 \times 7 + k$

B $100 = 5 \times 7 \times k$

C $100 = 5 \times 7 - k$

D $100 = 5 + 7 + k$

18 There were 823 people attending a baseball game after 37 people left. How many people were at the game before the people left?

A   786

B   850

C   860

D   896
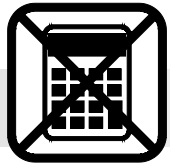
19   What value for *M* makes this equation true?

$$M \div 7 = 7$$

A   1

B   14

C   42

D   49

20   The perimeter of this pentagon is 52 cm.
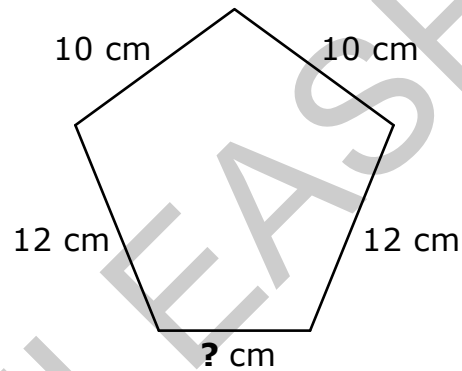
What is the missing length?

A   6 cm

B   8 cm

C   9 cm

D   10 cm
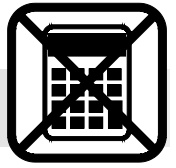
This is the end of the calculator inactive test questions.

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.**

21   A fraction of this circle is shaded.
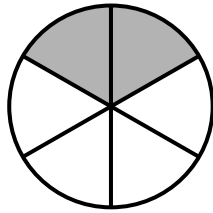
Which circle has an equal fraction shaded?

A

B

C
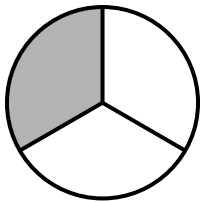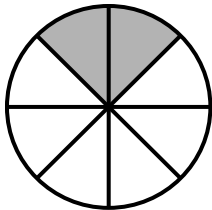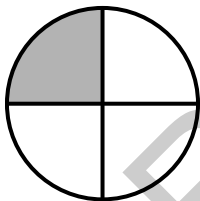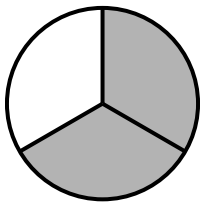
D
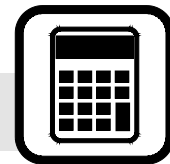
22   What fraction is represented by point *L* on this number line?
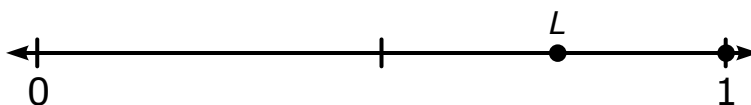
A $\frac{1}{2}$

B $\frac{2}{3}$

C $\frac{2}{4}$

D $\frac{3}{4}$

23   Carlos and his friends collected 72 rocks. Each person collected 9 rocks. How many people collected rocks?

A   8

B   9

C   63

D   81

24   Jasmine wrote 2 pages in her journal every day for 7 days. Her journal has 32 total pages. How many pages does Jasmine have left to write before her journal will be full?

A   14 pages

B   18 pages

C   25 pages

D   30 pages
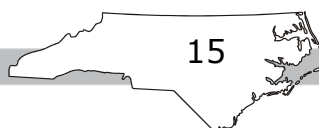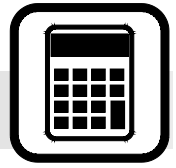
25   What fraction of the area of this figure is shaded?
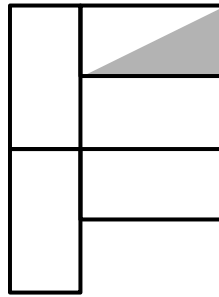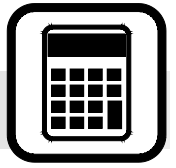
A $\frac{1}{4}$

B $\frac{1}{6}$

C $\frac{1}{8}$

D $\frac{1}{10}$

26   A truck rental company charges $20 per day plus a onetime fee of $40 to rent a truck. A person needs to rent a truck for 9 days. How much will the person pay to rent the truck?

A $540

B $380

C $220

D $180

Go to the next page.

27 Which circle is $\frac{3}{4}$ shaded?

A
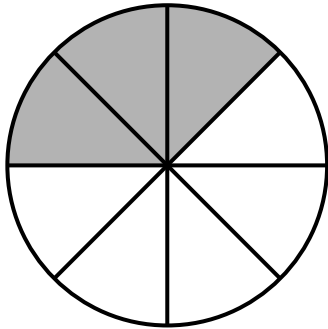
B
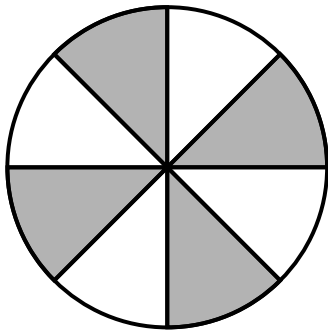
C
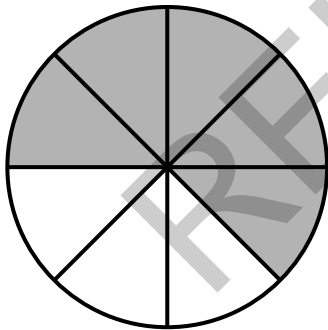
D
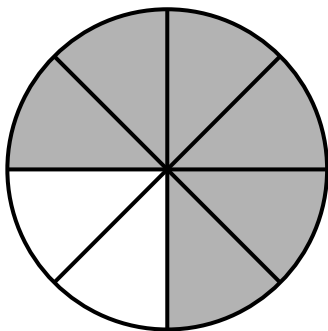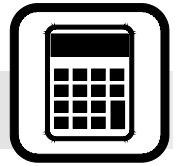
28   A third-grade class voted for their favorite subject, as shown.

Favorite Subjects

Math	△ △ △ △ △
Reading	△ △ △
Science	△ △
Writing	△ △ △

Key: △ = 2 votes

How many more students voted for math than science?

A   7

B   6

C   4

D   3

29   Which letter has a value of $\frac{3}{4}$ on this number line?

W   X   Y   Z

0   1
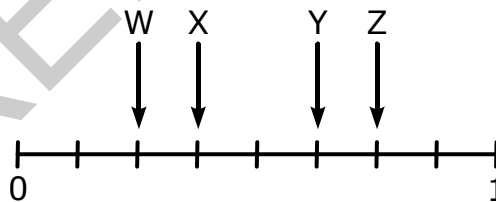
A   W

B   X

C   Y

D   Z
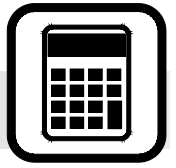
30 Sarah drew a shape. It was a quadrilateral, and all the sides were the same length. Which shape did Sarah draw?

A   pentagon

B   rhombus

C   trapezoid

D   triangle

31 A train makes 9 stops each day. How many days will it take for the train to make 63 stops?

A   7

B   9

C   54

D   72
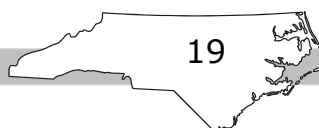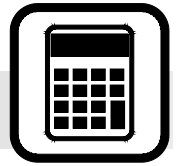
32 Four friends were playing a game. John and Bill were on Team 1. Susie and Amy were on Team 2. They made a graph to show how many points each person scored.

Game Scores

How many more points did Team 2 score than Team 1?

A   5

B   6

C   11

D   16
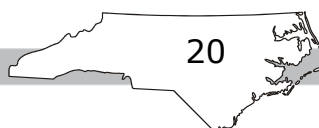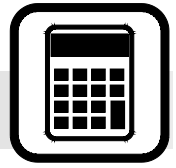
33   A school collects canned food for charity.

- Third-graders collected 327 cans.
- Third-graders collected 138 more cans than fourth-graders.

How many cans did the fourth grade collect?

A   289

B   211

C   189

D   111

34 Which expression can be used to find the missing number in this multiplication table?

✕	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48		60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45		63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

A   63 + 9

B   45 – 9

C   63 – 15

D   45 + 9
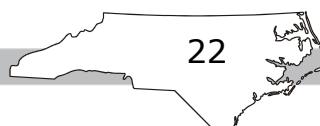
35   Donna shaded this rectangle.

Michael's rectangle is the same size. He shaded less than Donna. Which choice could be the shaded fraction of Michael's rectangle?

A $\frac{1}{3}$

B $\frac{2}{3}$

C $\frac{3}{3}$

D $\frac{4}{3}$

36   Ellen is comparing two rectangles.

- Rectangle P is 5 inches long and 1 inch wide.
- Rectangle Q is 4 inches long and 2 inches wide.

Which statement correctly compares the areas and perimeters of the rectangles?

A   The rectangles have equal areas, and rectangle P has a greater perimeter.

B   The rectangles have equal areas, and rectangle Q has a greater perimeter.

C   The rectangles have equal perimeters, and rectangle P has a greater area.

D   The rectangles have equal perimeters, and rectangle Q has a greater area.
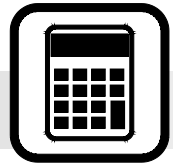
37   Lacey has a bookcase with 6 shelves.

- She used only 4 of the shelves.
- She put 6 books on each shelf.

Which choice shows another way Lacey could put the same number of books in the bookcase, but this time, using all of the shelves?

A   2 books on each shelf

B   4 books on each shelf

C   10 books on each shelf

D   24 books on each shelf

38   This shows a pencil and a ruler.
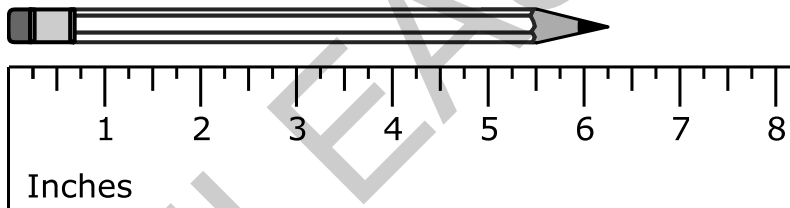
What is the length of the pencil?

A $5\frac{1}{2}$ inches

B   6 inches

C $6\frac{1}{4}$ inches

D $6\frac{1}{2}$ inches

Go to the next page.

39   Tanya baked 125 cookies for a bake sale. Mark baked 67 fewer cookies than Tanya. How many cookies did they bake in all?

A   183

B   192

C   250

D   267

40   Which answer choice shows two correct ways to arrange 21 pennies in equal rows?

A   2 rows of 1, or 1 row of 2

B   7 rows of 3, or 3 rows of 7

C   8 rows of 3, or 3 rows of 8

D   20 rows of 1, or 1 row of 20
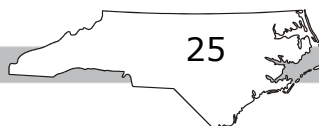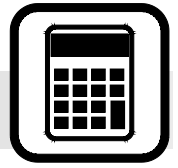
Directions:

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.**
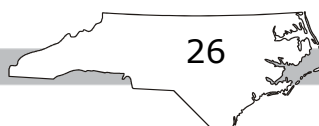
Grade 3
Mathematics
RELEASED Form
2018–2019
Answer Key

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

Calculator Inactive

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

Item Number	Type	Key	DOK	Domain
19	MC	D	1	NC.3.OA.3
20	MC	B	1	NC.3.MD.8

Calculator Active

Item Number	Type	Key	DOK	Domain
21	MC	A	2	NC.3.NF.3
22	MC	D	1	NC.3.NF.2
23	MC	A	2	NC.3.OA.2
24	MC	B	2	NC.3.OA.8
25	MC	C	2	NC.3.NF.1
26	MC	C	2	NC.3.OA.8
27	MC	D	1	NC.3.NF.3
28	MC	B	2	NC.3.MD. 3
29	MC	D	2	NC.3.NF.2
30	MC	B	1	NC.3.G.1
31	MC	A	1	NC.3.OA.3
32	MC	B	2	NC.3.MD.3
33	MC	C	2	NC.3.NBT.2
34	MC	D	2	NC.3.OA.9
35	MC	A	1	NC.3.NF.4
36	MC	D	2	NC.3.MD.8
37	MC	B	2	NC.3.OA.1
38	MC	C	1	NC.3.MD.2
39	MC	A	2	NC.3.OA.8
40	MC	B	1	NC.3.OA.1

*DOK:
1 = Recall
2 = Skill/Concept
3 = Strategic Thinking