Name Key

NC.4.OA.5 CFA (Cluster 9)

1. Kara made an input-output table using the same rule on each input number to get each output number. Which of the following could be the rule from the table?

Input	Output
5 ×4→	20
7 ×4→	28
9 ×4→	36
11 ×4→	44

a. add 15
b. divide by 4
(c.) multiply by 4
d. subtract 15

2. Skye made a list of numbers by using two math operations.

16, 14, 24, 22, 32, 30, 40, 38

Which of the following could be the rule used to create the pattern?

16, 14, 24 (a.) Subtract 2, add 10
16, 18, 8 b. Add 2, subtract 10
16, 4, 8 c. Subtract 10, add 2
16, 26, 24 d. Add 10, subtract 2

16, 24
16, 8 nope sorry!
16, 8
16,

3. Josh made a number pattern that begins with 45, and then adds 9 to get each new number in the pattern. Which set of numbers represents Josh's pattern?

a. 45, 54, 63, 71, 80
b. 45, 36, 27, 18, 9
(c.) 45, 54, 63, 72, 81
d. 45, 55, 65, 75, 85

45 + 9 = 54 + 9 = 63 + 9 = 72

4. The table below shows the relationship between the ages for two siblings, Jake and Jesse.

Jake's Age	Jesse's Age
14	6
15	7
16	8
17	9
18	10
19	11

Which of the following is true based on the table above?

a. Jake is 8 years younger than Jesse.
b. Jesse and Jake are only one year apart in age.
c. Jake is three times as old as Jesse.
d. Jesse is 8 years younger than Jake.

5. Carolina High School is planning the seating for the honorary guests at their graduation ceremony. The table shows how many guests can sit in each row.

GRADUATION SEATING	
Row	Number of seats
1	8
2	15
3	22
4	29
5	36

Looking at the table above, how many seats will be available for guests in row 3?

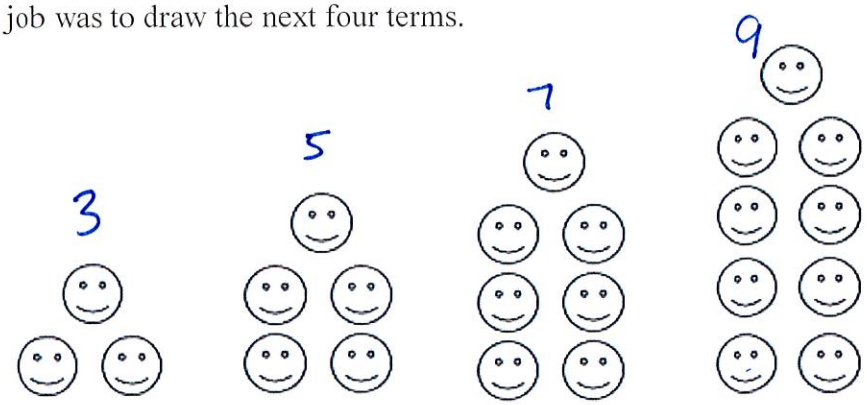
a. 21
b. 22
c. 23
d. 24

6. Which pattern uses the rule "add 4, multiply 3" if the pattern begins at 4?

a. 4, 12, 16, 48
b. 4, 8, 24, 28
c. 4, 12, 36, 39
d. 4, 8, 23, 27

$4+4=8 \times 3=24+4=28$

7. A student drew the first four terms in an increasing pattern for her partner. Her partner's job was to draw the next four terms.



Which statement is true about the next term in this pattern?

a. The next term will have 11 faces, which is an odd number.
b. The next term will have 12 faces, which is an even number.
c. The next term will have 13 faces, which is an odd number.
d. The next term will have 14 faces, which is an even number.

8. A teacher is assigning a group project. She is determining the number of students in each group based on the amount of time that she plans to give students to complete the project. She has made the following table to break down the group options.

Group Project	
Number of Students	**Work Time (in minutes)**
3	60
4	50
5	40
6	30

increase

decrease

Which statement best describes the relationship between the number of students in each group and the work time that the teacher plans to give to complete the project?

a. If more people are in a group, the group will be given less time to work.
b. If fewer people are in a group, the group will be given less time to work.
c. If more people are in a group, the group will be given more time to work.
d. The groups will get the same amount of work time regardless of the number of students in the group.

9. The 1st graders at Brown Elementary are planting watermelon seeds as a part of their Science unit. The table shows the number of seeds needed based on the distance between the seeds when they are planted.

Distance Between Seeds (in inches)	Number of Seeds
42	32
36	42
30	52
24	62

Closer ↓ Farther ↑ Fewer ↑ More ↓

What is the relationship between the distance between where the seeds are planted and the number of seeds needed?

a. The closer together the seeds are planted, the few seeds are needed.
b. The farther apart the seeds are planted, the fewer seeds are needed.
c. The farther apart the seeds are planted, the more seeds are needed.
d. There is no relationship.

10. Seth practiced his multiplication facts for 20 minutes each day for 5 days. At the end of each day, he recorded the total number of minutes he had practiced. Which pattern shows his list of daily totals?

a. 20, 25, 30, 35, 40
b. 20, 30, 40, 50, 60
c. 20, 40, 60, 80, 100
d. 20, 50, 80, 110, 140

Count by 20's

ANSWER KEY

1. C
2. A
3. C
4. D
5. B
6. B
7. A
8. A
9. B
10. C