# Third Grade Cluster 4 CFA Items
## Assessment
## Teacher Guide



**This assessment assesses students' ability to:**

- Use equations to represent mathematical situations
- Recognize contexts that involve multiplication and division
- Connect multiplication and division situations to multiplication expressions and equations
- Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities
- Solve problems in which you need to find the number of things in a group
- Use and represent properties of operations for multiplication
- Use the relationship between multiplication and division to solve division problems

**Common Core Standards:**
This assessment addresses each of the following Common Core Standards

**Data Driven Instruction:**
This assessment is one data point and should be used with data gathered from multiple sources to make an informed decision about student misconceptions and mastery.

# 3rd Grade Cluster 4 CFA Items – Scoring Guide

| Question | Standard | Answer |
|----------|----------|--------|
| 1 | NC.3.OA.3 | C |
| 2 | NC 3.OA.3 | B |
| 3 | NC 3.OA.3 | D |
| 4 | NC 3.OA.1 | C |
| 5 | NC 3.OA.3 | B |
| 6 | NC 3.OA.3 | D |
| 7 | NC 3.OA.3 | C |
| 8 | NC 3.OA.1 | B |
| 9 | NC 3.OA.2 | C |
| 10 | NC 3.OA.3 | B |
| 11 | NC 3.OA.3 | D |
| 12 | NC 3.OA.2 | A |
| 13 | NC 3.OA.1 | B |
| 14 | NC 3.OA.2 | D |
| 15 | NC 3.OA.3 | B |
| 16 | NC 3.OA.6 | B |
| 17 | NC 3.OA.8 | C |
| 18 | NC 3.OA.8 | C |
| 19 | NC 3.OA.8 | B |
| ~~22~~ 20 | NC 3.OA.9 | D |
| ~~23~~ 21 | NC 3.OA.9 | B |

Student Name: _____ Date: _____

## 3rd Grade Cluster 4 CFA Items
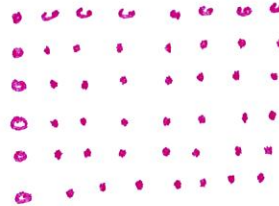
**Directions:**

Solve each problem and show your work.

1. Ivan displayed a collection of Hot Wheels on a shelf.

   - He made 6 rows.
   - He put 8 cars in each row.
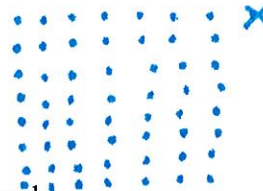
   How many cars does Ivan have in his collection?

   A  14                    B  42
   C  48                    D  64

2. Adela has 56 dolls.  She stores them on 8 shelves.  If she puts the same number on each shelf, how many dolls will be on one shelf?

   A  6                     B  7
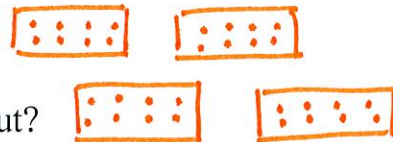   C  8                     D  9

3. Tyshawn is hosting a cookout at his house this weekend.

   - He bought 4 packs of hotdogs.
   - Each pack contains 8 hotdogs.
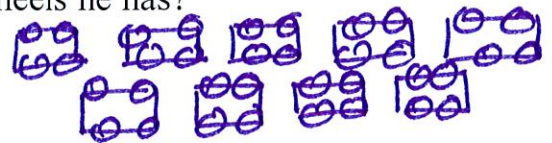
   How many hotdogs did Tyshawn buy for the cookout?

   A  2                     B  12
   C  16                    D  32

4. Archie has 9 model cars at home. Every car has 4 wheels. Which expression best represents how Archie would determine how many wheels he has?

   A  9 + 4                 B  9 - 4
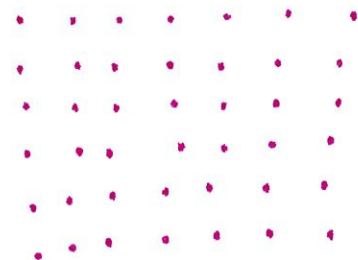   C  9 x 4                 D  9 ÷ 4

5. The music teacher was getting the stage ready for a performance.

   - She set up 6 rows of chairs.
   - Each row had 7 chairs.

   How many chairs did the music teacher have on the stage?

   A  13                    B  42
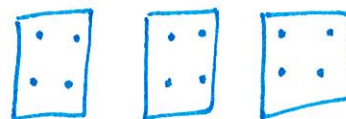   C  54                    D  56

6. Nathan collected 12 lightning bugs and put them into jars. He put an equal number in each of the 3 jars. Which equation below can be used to represent how the bugs were placed in jars?

A   $12 - 3 = 9$

B   $12 \times 3 = 36$

C   $12 + 3 = 15$

D   $12 \div 3 = 4$

7. Betty started babysitting to earn money this summer.

- She makes $7 every day.
- She has worked 5 days.

How much money has Betty earned?

$7+7+7+7+7$

$14 + 14 + 7$

$28 + 7 = 35$

A   $2

B   $12

C   $35

D   $49

Student Name: _____

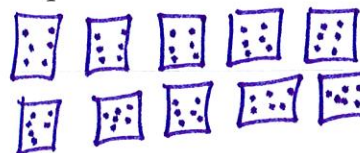**Calculator Active:** You may use a calculator on this part of the test.

8. Michael has a collection of trading cards that he put in a book. There are 10 pages in his book. Each page holds 6 cards. Which expression can be used to find the total number of trading cards Michael has?

A   $10 + 6$

B   $10 \times 6$

C   $10 \div 6$

D   $10 - 6$

9. Which problem could be solved using the expression $36 \div 4$?

A   Tina had 36 pieces of gum. She gave 4 pieces to a friend. How many pieces of gum does Tina have left? —

B   Tina had 36 pieces of gum. She bought 4 more pieces. How many pieces does Tina have now? +

C   Tina had 36 pieces of gum. She gave all of her gum to 4 friends. If she gave each friend the same number of pieces, how many pieces did she give each friend? ÷

D   Tina had 4 friends. She gave each of them 36 pieces of gum. How many pieces of gum did Tina give away? ✗
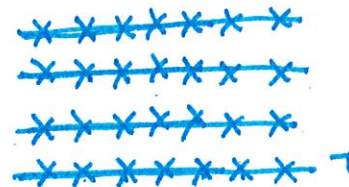
10. Ms. Harrison wants to rearrange the desks into rows.

   - There are 28 desks in the classroom.
   - She wants 4 rows of desks.

   How many desks will Ms. Harrison put in each row?

   A  6                    B  7
   C  24                   D  32

11. Amanda planted a flower garden.

   - She planted 8 rows of flowers.
   - Each row had 4 flowers.

   Which equation below represents Amanda's flower garden?

   A  $8 \div 4 = 2$         B  $8 - 4 = 4$
   C  $8 + 4 = 12$           D  $8 \times 4 = 32$

12. Four girls have 20 bracelets to share equally. How many bracelets will each girl get?

   A  5                     B  16        $20 + 20 + 20 + 20$
   C  24                    D  80        $20 \times 4$

13. Which problem could be solved using the expression $8 \times 4$?

   A  Rylan has a pack with 8 pieces of gum.  She gets 4 more pieces.  How many pieces of gum does Rylan have now?  +

   B  Rylan has 8 pages of pictures in her journal.  Each page has 4 pictures.  How many pictures are in Rylan's album?  ✗

   C  Rylan has 8 cookies.  She wants to share them equally between 3 friends and herself.  How many cookies will Rylan and each of her friends get?  ÷

   D  Rylan has to read 8 chapter books this month.  She has read 4 books so far, how many books does Rylan have left to read?  —

14. Which of the following problems could be solved using the expression $12 \div 4$?

   A  12 children were on the playground on Sunday.  There were 4 more students on the playground on Saturday than on Sunday.  How many students were on the playground on Saturday?  —/+

   B  12 families went to a piano recital.  Each family had 4 people.  How many people were at the recital? ✗

   C  12 cookies were in the cookie jar.  Someone ate 4 cookies.  How many cookies are left in the cookie jar?—

   D  There were 12 model cars on a book shelf.  There were an equal number of cars on each of the 4 shelves.  How many cars were on each shelf?
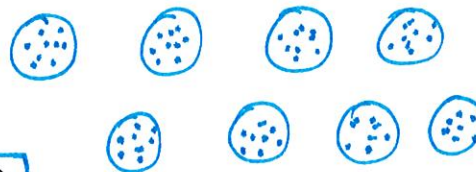
15. Sonya has stickers to share with her Girl Scout troop.

    • Sonya has 72 stickers.
    • There are 8 girls in her troop.

    How many stickers will each girl get?
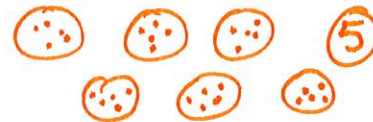
    A  6                           B  9
    C  64                          D  576

16. Jafari has 30 toy cars. He wants to give the toy cars to 6 of his friends. **S** is the number of toy cars that Jafari will give to each friend, Which expression can Jafari use to figure out how many toy cars he should give to each friend?

    A  30 x 6 = **S**  180          B  **S** x 6 = 30
    C  30 - 6 = **S**               D  **S** + 6 = 30
            24                              24

17. Third grade will need 172 juice boxes for an end-of-year celebration.

    • Parents have donated 9 packages of juice boxes.
    • Each package has 6 juice boxes.

    If **J** is the number of juice boxes still needed, which equation could be used to find how many juice boxes are still needed?

    A  9 x 6 x **J** = 172          B  **J** x 6 + 9 = 172
    C  **J** + 6 x 9 = 172          D  9 x 6 – **J** = 172

18. Tyler wants to buy a Star Wars Lego set that costs $116. He is earning money to buy the Lego set by walking dogs for his neighbors.

    5 x 9 or 5+5+5+5+5+5+5+5+5
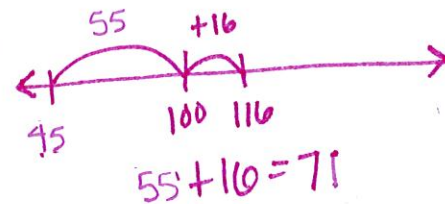                      45

    • Each time Tyler walks a dog he earns $5.
    • He has walked 9 dogs so far.

    How much more money does Tyler need to buy the Lego set?

    A  $45                          B  $61
    C  $71                          D  $101

    55   +16
    45   100  116
    55 + 16 = 71

19. Four classes collected cans for the can food drive. Estimate how many cans were donated by the four classes. Round to the nearest hundred.

| Cans Collected | |
|---|---|
| Class | Cans |
| Brantley | 209 | *200* |
| Palermo | 162 | *200* |
| Parsons | 239 | *200* |
| Peake | 87 | *100* |

*700*

A   600

B   700

C   800

D   900

20. John created the following pattern for his friends:

14, 29, 44, 59, _____, 89   *-15*

*+15  +15  +15*

What is one way that his friends could find the missing number?

A   Add 59 and 89

B   Add 15 to 89

C   Subtract 59 from 89

D   Subtract 15 from 89

21. Use this multiplication chart to decide which statement below is true.

| x | 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 | 54 | 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 | 54 | 63 | 72 | 81 | 90 |
| 10 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |

*EVEN   ODD   EVEN*

A   All of the multiples of 3 are even.

B   All of the multiples of 2 are even.

C   Multiples of 4 can be odd or even.

D   Multiples of 7 cannot have a 0 in the ones place.

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