

**Third Grade  
Math Study Guide  
Second Nine -Weeks 2018**

**3.OA.1-** For products of whole numbers with two factors up to and including 10:

- Illustrate and explain strategies including arrays, repeated addition, decomposing a factor, and applying the commutative and associative properties.

1. Write a multiplication sentence for the picture.



- A.  $3 + 6 = 9$       C.  $3 \times 2 = 6$   
B.  $4 \times 3 = 12$       D.  $3 \times 3 = 9$

2. Which of the following is equal to  $4 \times 8$ ?

- A.  $4 + 4$                       B.  $8 \times 8 \times 8 \times 8$       C.  $8 + 8 + 8$                       D.  $8 + 8 + 8 + 8$

3. What is the best way to figure out how many X's are in the box?

X X X X X
X X X X X
X X X X X
X X X X X

- A.  $4 \times 5$                       B.  $4 \times 4$                       C.  $5 + 4$                       D.  $5 + 5$

4. Joe has 7 cookies. Each cookie has 5 chocolate chips in it. How many chocolate chips are there in the 7 cookies?

- A. 12                      B. 35                      C. 2                      D. 40

5. Interpret  $4 \times 3$  in a real world context.

- A. There are 4 cookies and you eat 3 of them.  
B. You have 4 cookies with 3 chocolate chips on each.  
C. You have 4 cookies and buy 3 more.  
D. You had 4 cookies and lost 3 of the cookies.

6. Which number sentence shows the number of O's in the drawing?

0000	0000	0000	0000	0000
0000	0000	0000	0000	0000

- A.  $5 + 8 = 13$       B.  $4 \times 8 = 32$       C.  $5 \times 8 = 40$       D.  $3 \times 8 = 24$

7. Which property of multiplication is shown below?

$$2 \times (3 \times 2) = (2 \times 3) \times 2$$

- A. Associative property      B. Commutative property      C. Distributive property      D. Property of zero

8. Which of the following statements is **FALSE**?

- A.  $4 \times 2 = 2 \times 4$                       B.  $0 + 7 = 7$                       C.  $0 \times 5 = 5$                       D.  $4 + 9 = 9 + 4$

9. What number goes in the box?

$$4 \times 7 = \square \times 4$$

- A. 4      B. 28      C. 11      D. 7

10. What is the value of B in the equation below?

$$7 \times (B \times 4) = (7 \times 5) \times 4$$

- A. 28      B. 5      C. 150      D. 3

11. Which expression is equivalent to  $6 \times 53$ ?

- A.  $(6 \times 50) + (6 \times 3)$       C.  $(6 + 50) \times (6 + 3)$   
B.  $(10 \times 50) - 3$       D.  $(6 \times 50) + 3$

**3.OA.2-For whole-number quotients of whole numbers with a one-digit divisor and a one-digit quotient:**

12. Todd has 64 pencils. If he puts them into groups of 8, how many groups will he have?

- A. 72      B. 8      C. 7      D. 56

13. Sam has 96 cookies.

There are 12 cookies in a dozen.

He wants to put the cookies into containers by the dozen.

How many dozens can Sam make?

- A. 8      B. 9      C. 108      D. 84

**3.OA.3 Represent, interpret, and solve word problems involving multiplication and division.**

14. Sam had 3 cookies.

She cut each cookie into 2 equal parts.

How many cookie pieces did she have?

- A. 5      B. 12      C. 6      D. 1

15. Joe collects five red pencils and two yellow pencils every day. How many pencils will he collect in ten days?

- A. 20      B. 9      C. 18      D. 70

16. There are 7 tables. Each table has 6 plates on it. How many plates are there altogether?

- A. 10      B. 13      C. 42      D. 49

17. Seven girls have 42 bracelets to share equally.

How many bracelets will each girl get?

- A. 6      B. 49      C. 35      D. 8

18. Sally has 7 bicycles. Each bicycle has 2 wheels.

Which expression best represents how Sally would determine how many wheels she has?

- A.  $7 + 2 = 9$       B.  $7 - 2 = 5$       C.  $7 \times 2 = 14$       D.  $7 \div 2 = 9$

19. Tamara has 35 coins. She will put an equal number of coins in each of 5 boxes.

Which number sentence is in this fact family?

- A.  $35 + 5 = 40$       B.  $35 - 5 = 30$       C.  $35 \times 5 = 175$       D.  $35 \div 5 = 7$

20. Laura has to wrap 64 gifts to put under the tree.  
She can wrap 8 gifts per hour.

How many hours will it take to wrap all of the gifts?

- A. 72      B. 56      C. 8      D. 7

**3.OA.6** Solve an unknown-factor problem, by using division strategies and/or changing it to a multiplication problem.

21. What is the value of R in the equation below?

$$R \div 5 = 6$$

- A. 11      B. 30      C. 1      D. 25

22.  $4 \times \underline{\quad} = 36$

- A. 6      B. 7      C. 8      D. 9

23.  $8 \div \underline{\quad} = 1$

- A. 1      B. 8      C. 7      D. 9

24.  $9 \times S = 72$

- A. 10      B. 9      C. 8      D. 7

25. Which question can be asked to solve the number sentence

$$35 \div 7 = 5?$$

- A. What number equals 7 when multiplied by 5?  
B. What number equals 5 when multiplied by 35?  
C. What number equals 35 when multiplied by 7?  
D. What number equals 35 when multiplied by 35?

**3.OA.7-** Demonstrate fluency with multiplication and division with factors, quotients and divisors up to and including 10.

- Know from memory all products with factors up to and including 10.
- Illustrate and explain using the relationship between multiplication and division.

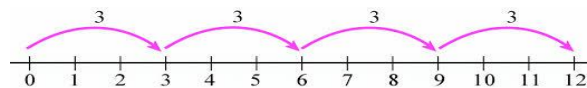
26.  $8 \times 7 =$

- A. 70      B. 64      C. 56      D. 49

27.  $7 \times 6 =$

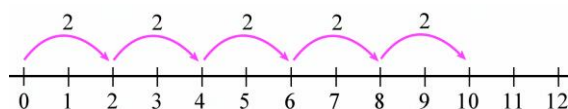
- A. 24      B. 36      C. 48      D. 42

28. Which equation is represented on the number line?



- A.  $3 \times 3 = 9$       B.  $3 + 4 = 7$       C.  $3 \times 4 = 12$       D.  $12 \div 3 = 4$

29. Which equation is represented on the number line?



- A.  $10 \times 2 = 20$       B.  $5 + 2 = 7$       C.  $5 \times 2 = 10$       D.  $20 \div 5 = 4$

**3.OA.8-** Solve two-step word problems

30. Tim wants to buy a skateboard that costs \$42.  
He earns \$7 for each lawn he mows.  
Tim has already mowed 2 lawns.  
How many more lawns does Tim need to mow to have enough money to buy his skateboard?

- A. 4      B. 6      C. 12      D. 84

31. Leo has three times as many pencils as Joe.  
When Joe buys 3 more pencils, he will have 15.  
How many pencils does Leo have?

- A. 42      B. 36      C. 18      D. 48

32. Lisa is having a party.  
• She bought 6 boxes of hamburgers.  
• Each box contains 4 hamburgers.

How many hamburgers did Lisa buy for the party?

- A. 10      B. 2      C. 20      D. 24

33. Sam put 345 ornaments on the tree.  
• He added more ornaments to the tree.  
• Now the tree has 789 ornaments on the tree.

How many ornaments did Sam add to the tree?

- A. 1,134      B. 444      C. 585      D. 1,124

34. Lisa runs 3 miles a day, 7 days a week.  
She has already run 18 miles this week.  
How many more times will Lisa have to run this week?

- A. 1      B. 3      C. 21      D. 15

### 3.OA.9 Interpret patterns of multiplication

Cailey uses the same number of cups of flour for each cake. The table shows the total cups of flour for different numbers of cakes.

Number of Cakes	Cups of Flour
1	6
2	12
3	18
4	24

35. What is the rule of the table?

- A. number of cakes  $\times$  3 = cups of flour      C. number of cakes + 3 = cups of flour  
B. number of cakes  $\times$  6 = cups of flour      D. number of cakes + 9 = cups of flour

36. How many cups of flour are needed for 8 cakes?

- A. 14 cups      B. 42 cups      C. 48 cups      D. 56 cups

### 3.NBT.3 Multiply one-digit whole numbers by multiples of 10

37. Larry has 20 friends.  
He gave each friend 7 flowers.  
How many total flowers did he give?

- A. 27            B. 90            C. 140            D. 30

38. What is the product of 9 and 50?

- A. 450            B. 45            C. 41            D. 630

39.

$\square = 4 \times 20$

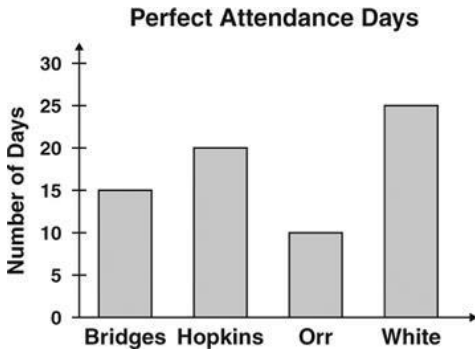
- A. 800            B. 80            C. 24            D. 16

40. Mary plays 4 games of soccer each month.  
How many soccer games will she play in 10 months?

- A. 14            B. 40            C. 6            D. 44

NC.3.MD.3 Represent and interpret scaled picture and bar graphs: Solve one and two-step word problems using information from graphs

41. The graph below shows the number of days each teacher's class had perfect attendance in May.



On how many more days did Mrs. Bridges' class have perfect attendance than Mr. Orr's class?

- A. 25  
B. 20  
C. 5  
D. 15

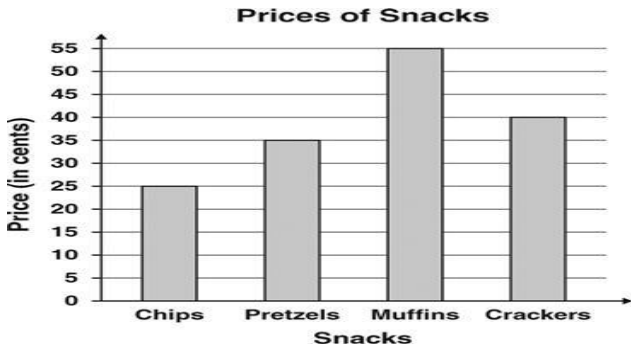
42. The pictograph shows the number of ribbons each child received on Field Day.



If Hollie won 14 ribbons, what would the graph show for her?

- A
- B
- C
- D

43. Look at the information below.



How much more do muffins and crackers cost than chips and pretzels?

- A 95 cents
- B \$1.55
- C 60 cents
- D 35 cents

44. Look at the information below. Nine students chose cookies and cream ice cream.

Ice Cream Survey

Flavor	Number of Students
Chocolate	
Vanilla	
Strawberry	
Cookies and Cream	

Key: = 2 students

What should the graph show for this flavor?

- A
- B
- C
- D

45. Mrs. Berry asked a group of third graders to name their favorite ice cream flavor. She used the data to create the graph below.

Ice Cream Survey

Flavor	Number of Students
Chocolate	
Vanilla	
Strawberry	
Cookies and Cream	

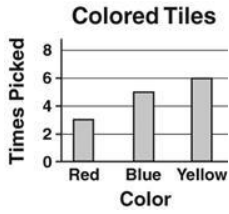
Key: = 2 students

How many more students chose vanilla than strawberry?

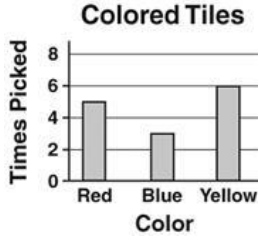
- A. 16
- B. 12
- C. 8
- D. 4

46. Mark picked colored tiles out of a bag. He picked 3 reds, 5 blues and 6 yellows. Which bar graph shows Mark's results?

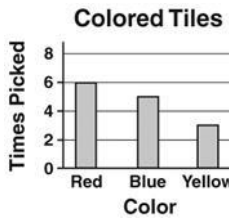
A



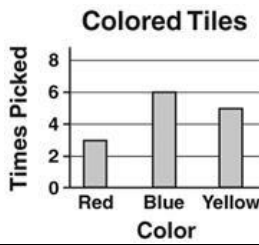
B



C



D



Answers

1. D	2. D	3. A	4. B	5. B
6. C	7. A	8. C	9. D	10. B
11. A	12. B	13. A	14. C	15. D
16. C	17. A	18. C	19. D	20. C
21. B	22. D	23. B	24. C	25. C
26. C	27. D	28. C	29. C	30. A
31. B	32. D	33. B	34. A	35. B
36. C	37. C	38. A	39. B	40. B
41. C	42. A	43. D	44. C	45. C
46. A				