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Grade 3: Module 4 - Multiplication - Form A**Part 1**

1. What is another way of expressing 6×14 ?

- A. $(6 \times 10) + (6 \times 4)$
- B. $(6 \times 1) + (6 \times 4)$
- C. $(6 \times 10) + 4$
- D. $6 + (10 \times 4)$

2. What number goes in the blank to make the number sentence true?

$$17 \times 3 = (\underline{\quad} \times 3) + (7 \times 3)$$

- A. 1
- B. 7
- C. 10
- D. 21

3. Which expression has the same value as $(6 \times 2) + (6 \times 5)$?

- A. 6×25
- B. 6×7
- C. $12 + 11$
- D. $36 + 10$

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4. Which expression is equal to 540?

A. 4×50

B. 5×40

C. 8×80

D. 6×90

5. Ms. Hart wrote the number sentence below on the board.

$$2 \times 30 = \underline{\hspace{2cm}}$$

What number makes the number sentence correct?

A. 6

B. 50

C. 60

D. 600

6. Jack read 40 minutes each day for 8 days. What is the total number of minutes that Jack read?

A. 5 minutes

B. 32 minutes

C. 48 minutes

D. 320 minutes

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7. The table shows the number of students working in groups in a math class.

Student Groups in Math Class	
Groups	Students
1	4
2	8
3	12
4	16

What is one pattern that can be seen in the table?

- A. The number of students increases by 1 each time.
 - B. The number of students increases by 2 each time.
 - C. The number of students increases by 3 each time.
 - D. The number of students increases by 4 each time.
8. The first number in a number pattern is 12. The rule is to add 6 to get the next number in the pattern. If the pattern continues, which statement is true?
12, ____, ____, ____
- A. All the numbers in the pattern can be divided equally by 6.
 - B. All the numbers in the pattern can be divided equally by 12.
 - C. All the numbers in the pattern can be divided equally by 18.
 - D. All the numbers in the pattern can be divided equally by 72

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9. Which set of numbers has an even sum?

- A. 2 and 9
- B. 7 and 14
- C. 3 and 8
- D. 4 and 10

10. Which set of numbers has an odd product?

- A. 3 and 8
- B. 4 and 7
- C. 5 and 9
- D. 6 and 1

11. Which expression is equal to 360?

- A. 4×90
- B. 3×60
- C. 6×30
- D. 18×10

12. What value makes the number sentence correct?

$$5 \times 80 = \underline{\hspace{2cm}}$$

- A. 130
- B. 400
- C. 580
- D. 850

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13. What number goes in the blank to make the number sentence true?

$$26 \times 4 = (20 \times 4) + (\underline{\quad} \times 4)$$

- A. 2
- B. 6
- C. 26
- D. 62

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Part 2

14. Rachel is studying patterns with addition. She added $4 + 6$ for a sum of 10. Then, she added $6 + 8$ for a sum of 14. She made the prediction that when she adds any two even numbers, the sum will be even.

Do you agree or disagree? (Use table below for examples.)

+	1	2	3	4	5	6	7	8	9
1	2	3	4	5	6	7	8	9	10
2	3	4	5	6	7	8	9	10	11
3	4	5	6	7	8	9	10	11	12
4	5	6	7	8	9	10	11	12	13
5	6	7	8	9	10	11	12	13	14
6	7	8	9	10	11	12	13	14	15
7	8	9	10	11	12	13	14	15	16
8	9	10	11	12	13	14	15	16	17
9	10	11	12	13	14	15	16	17	18

Explain your answer.

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15. What is the relationship between 4×7 and 4×70 ? How can you use what you know about multiplying by multiples of ten to help solve the problem?

Explain your answer using words and number facts

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Part 3

16. Use the number fact in the oval to complete the boxes.

A. Draw the array to model the number fact.	B. Using the same factors, write another multiplication fact that has an equal product.
<div data-bbox="600 625 1068 884">4×5</div>	
C. Write the number fact as the sum of two products.	D. Draw the arrays to match your answer from Box C.

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Answer Key for Grade 3 Module 4 Assessment - Form A			
Question Number	Standard	Answer	Reasons for Answers
1	3.OA.B.5	A	B. Multiplied the digit 1 in (6×1) instead of 10 as in (6×10) C. Multiplied (6×10) and then added the 4 instead of multiplying (6×4) D. Wrote the second factor as (10×4) and added it to the 6
2	3.OA.B.5	C	A. Chose the digit 1 instead of 10 B. Repeated the digit 7 instead of choosing the digit 10 D. Multiplied the 7 and 3 instead of using the 10 from the 17
3	3.OA.B.5	B	A. Used the digit 2 and the digit 5 to inaccurately form the 25 C. Multiplied the 6 and 2 and then added the 6 and 5 D. Multiplied the 6 and 6 and multiplied the 2 and 5
4	3.NBT.A.3	D	A. Reversed the 5 and 4 digits and multiplied 4 by 50 B. Multiplied 5 by 40, inserting the multiplication symbol between the hundreds and tens place value C. Chose the incorrect multiplication fact for 54 ($8 \times 8 \neq 54$) and therefore 540 ($8 \times 80 \neq 540$)
5	3.NBT.A.3	C	A. Multiplied 2×3 instead of 2×30 B. Added the 2 and 3 and wrote the product as 50 D. Multiplied by 100 instead of 10 or by 300 instead of 30
6	3.NBT.A.3	D	A. Divided instead of multiplying ($40 \div 8 = 5$) B. Subtracted instead of multiplying ($40 - 8 = 32$) or multiplied 4×8 instead of 40×8 C. Added instead of multiplying ($40 + 8 = 48$)
7	3.OA.D.9	D	A. Looked at the increase in the

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			number of groups B. Looked at the number of groups for 8 students C. Looked at the number of groups for 12 students
8	3.OA.D.9	A	B. Chose the answer with 12 because the value was given as the first number in the pattern C. Chose the answer with 18 because it is the sum of the two values in the problem ($12 + 6 = 18$) D. Chose the answer with 72 because it is the value that is the product of the two values given in the problem ($12 \times 6 = 72$)
9	3.OA.D.9	D	A. Chose (2 and 9) because 2 is even or computed the product instead of the sum B. Chose (7 and 14) because 14 is even or computed the product instead of the sum C. Chose (3 and 8) because 8 is even or computed the product instead of the sum
10	3.OA.D.9	C	A. Chose (3 and 8) because 3 is odd or computed the sum instead of the product B. Chose (4 and 7) because 7 is odd or computed the sum instead of the product D. Chose (6 and 1) because 1 is odd or computed the sum instead of the product
11	3.NBT.A.3	A	B. Used the digits in the given value (360) C. Used the digits in the given value and reversed them D. Multiplied the first two digits ($3 \times 6 = 18$) and then listed the remaining zero as the value of 10
12	3.NBT.A.3	B	A. Added the 5 and 8 from the multiplication problem and kept the 0 from the tens place value (80)

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			C. Used the digits from the multiplication problem D. Reversed the digits from the multiplication problem
13	3.OA.B.5	B	A. Used the 2 digit from the 26 C. Used the 26 from the multiplication problem D. Reversed the digits from the multiplication problem
**Teacher Note: Sample responses are shown below.			
14	3.OA.D.9	See below	
<p>Agree: When adding any two even numbers, both addends can be evenly divided by 2 so when you add the numbers, the sum is even.</p> <p>Example: $6 + 4 = 10$ $6 \div 2 = 3$; $4 \div 2 = 2$ Both addends can be equally divided by 2, so the sum of the two numbers is even.</p>			
15	3.NBT.A.3	See below	
<p>4×7 and 4×70</p> <p>The product of 4 times 7 is 28.</p> <p>Because 70 is ten times more than 7, so 4×70 is ten times more than 4×7</p>			
16	3.OA.B.5	See below	

<p>A. Draw an array to model the number fact.</p> <div style="border: 1px solid black; width: 100px; height: 100px; margin: 10px auto; position: relative;"> <!-- Empty 10x10 grid for drawing --> </div>	<p>B. Using the same factors, write another multiplication fact that has an equal product.</p> <p style="text-align: center;">5×4</p>
<div style="border: 2px solid black; border-radius: 50%; width: 150px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center; font-size: 2em; font-weight: bold;"> 4×5 </div>	
<p>C. Write the number fact as the sum of two products.</p> <p style="text-align: center;">$(2 \times 5) + (2 \times 5)$</p>	<p>D. Draw the arrays to match from Box C.</p> <div style="margin-top: 10px;"> <div style="border: 1px solid black; width: 100px; height: 40px; margin-bottom: 10px;"></div> <div style="border: 1px solid black; width: 100px; height: 40px;"></div> </div>