Tier 2 Mathematics Intervention

Module: Multiplication & Division Relationships (MDR)

Form B Assessment

Name ________________________________

Date ________________________________

Teacher ______________________________
1.) Makayla was skip counting by 4s. Circle the answer that shows the first 6 numbers Makayla skip counted.

A  4, 4, 4, 4, 4, 4  
B  4, 8, 12, 16, 20, 24  
C  4, 5, 6, 7, 8, 9  
D  4, 6, 9, 13, 18, 24

2.) Circle the answer that shows 7 groups of 2.

A  7 + 7 + 7 + 7 + 7 + 7 + 7  
B  14 + 14  
C  7 + 7 + 2 + 2  
D  2 + 2 + 2 + 2 + 2 + 2 + 2

3.) Circle the answer of the correct equal group sentence for the equal groups model.

A  7 groups of 4 equals 28.  
B  28 groups of 7 equals 4.  
C  4 groups of 7 equals 28.  
D  7 groups of 7 equals 28.

4.) Circle the answer that shows the correct equal groups model for 5 groups of 8 equals 40.

A  
B  
C  
D  
5.) Circle the answer of the multiplication equation for the repeated addition equation $6 + 6 + 6 = 18$.

   A  $6 \times 3 = 18$
   B  $6 \times 6 \times 6 = 18$
   C  $6 \times 18 = 3$
   D  $3 \times 3 \times 3 \times 3 \times 3 \times 3 = 18$

6.) Kyle separated 20 apples into baskets and told the teacher they were in equal groups. Circle the answer that shows the apples in equal groups.

   A
   B
   C
   D

7.) Solve the multiplication problem using the number line. Circle the answer of the problem.

   $\times 1 \quad \times 2 \quad \times 3 \quad \times 4 \quad \times 5 \quad \times 6$

   A  $4 \times 6 = 6$
   B  $6 \times 4 = 24$
   C  $6 \times 6 = 24$
   D  $4 \times 4 = 24$
8.) Karen was asked to model $3 \times 4$ on the number line. Circle the answer that shows the correct model.

- **A**
  ![Number Line Option A]

- **B**
  ![Number Line Option B]

- **C**
  ![Number Line Option C]

- **D**
  ![Number Line Option D]

9.) Circle the multiplication equation for the bar model.

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- **A** $7 \times 7 = 49$
- **B** $7 + 5 = 12$
- **C** $7 \times 5 = 35$
- **D** $7 \times 5 = 30$
10.) Jonah ran 4 miles every day for 1 week. After 1 week, how many miles did Jonah run in all? (Remember: 1 week = 7 days) Circle the letter of the bar model that represents this problem.

A  $7 \times 4$

B  $3 \times 3$

C  $7 \times 7$

D  $3 \times 1$

11.) The box of crayons has 4 rows with 8 crayons in each row. Circle the letter of the array and multiplication equation that represents the crayon box.

A  $4 \times 2 = 8$

B  $4 \times 8 = 32$

C  $8 \times 1 = 8$

D  $4 \times 4 = 16$

12.) Circle the repeated addition equation for the array.

A  $3 + 9 = 27$

B  $9 + 9 + 9 = 27$

C  $3 + 3 + 3 = 27$

D  $9 + 9 + 9 = 3$
13.) Circle the multiplication equation that represents the shaded area.

A 40 × 1 = 40
B 5 × 8 = 40
C 20 × 2 = 40
D 30 × 10 = 300

14.) Aaron is drawing a model of the kitchen floor. He shaded 9 columns of 4 tiles. What is the area of the kitchen floor?

A 13 square units
B 18 square units
C 36 square units
D 35 square units
15.) What is the shaded area of the area model?

![Area Model]

A 10 square units  
B 40 square units  
C 20 square units  
D 2 square units

16.) Which multiplication equation can be used to find the area of the dog house?

![Dog House]

A $3 \times 3$  
B $7 \times 3$  
C $7 \times 7$  
D $7 \times 8$
Solve using the multiplication table. Circle the correct answer.

17.) $6 \times 8$  

A 14  
B 42  
C 56  
D 48

18.) $7 \times 7 = $  

A 14  
B 56  
C 49  
D 42
19.) 5 students equally shared 13 pencils. How many pencils did each student get? Circle the correct answer.
   A 13 shared equally with 5 friends equals 2 per friend with 3 leftover.
   B 5 shared equally with 13 friends equals 2 per friend with 3 leftover.
   C 13 shared equally with 5 friends equals 1 per friend with 8 leftover.
   D 5 shared equally with 13 friends equals 8 per friend with 0 leftover.

20.) 4 friends found 17 silver coins. Which way shows the friends sharing equally? Circle the correct answer.
   A 17 shared equally with 4 friends equals 3 per friend with 5 leftover.
   B 17 shared equally with 4 friends equals 4 per friend with 1 leftover.
   C 4 shared equally with 17 friends equals 4 per friend with 1 leftover.
   D 17 shared equally with 4 friends equals 5 per friend with 0 leftover.

Draw dots in the bar model to represent the counters. Circle the answer that completes the equation.

21.) 36 divided equally into 6 groups equals ________.

   |     |     |     |     |
   |     |     |     |     |
   |     |     |     |     |

   A 33          B 108          C 6          D 5

Choose the most reasonable answer.

22.) Carlos has 19 stickers. He wants to give his 2 younger brothers the same amount. About how many stickers should his brothers each receive?
   A 21 stickers each
   B 38 stickers each
   C 9 stickers each
   D 6 stickers each
23.) Multiplication is related to repeated _________________.
   A multiplication  
   B addition  
   C division  
   D subtraction

24.) When you divide the whole into less groups, what happens to the amount in each group? Circle the best answer.
   A The amount in each group is less.  
   B The amount in each group is more.  
   C The amount in each group doesn’t change.  
   D The amount in each group only changes the whole.

25.) Circle the equation that matches the bar model.

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   A 24 divided into groups of 6 equals 4 equal groups.  
   B 9 divided into groups of 3 equals 24 equal groups.  
   C 24 divided into groups of 4 equals 6 equal groups.  
   D 6 divided into groups of 4 equals 24 equal groups.

Choose the correct bar model.

26.) 56 divided into groups of 7 equals 8 equal groups.

   A
   
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27.) Circle the correct number family triangle from the given number equation.

\[ 8 \times 7 = 56 \]

\[ 56 \div 8 = 7 \]

A

\[
\begin{array}{c}
\times, \div \\
35 \quad 8
\end{array}
\]

B

\[
\begin{array}{c}
\times, \div \\
56 \quad 7
\end{array}
\]

C

\[
\begin{array}{c}
\times, \div \\
8 \quad 7
\end{array}
\]

D

\[
\begin{array}{c}
\times, \div \\
8 \quad 56
\end{array}
\]

28.) Circle a multiplication equation that belongs to this number family.

\[ 6, 8, 48 \]

A \[ 6 \times 48 = 8 \]

B \[ 6 \times 8 = 48 \]

C \[ 8 \times 48 = 6 \]

D \[ 48 \times 6 = 8 \]

29.) Which fact does not belong to the number family?

\[ 3, 9, 27 \]

A \[ 3 \times 9 = 27 \]

B \[ 9 \div 27 = 3 \]

C \[ 27 \div 9 = 3 \]

D \[ 9 \times 3 = 27 \]

30.) Circle the example of the Identity Property of Multiplication.

A \[ 1 \times 12 = 12 \]

B \[ 5 \times 5 = 25 \]

C \[ 7 \times 0 = 0 \]

D \[ 2 \times 3 = 6 \times 1 \]
31.) Anna has 8 ten-dollar bills. Circle the correct equation that shows how much money Anna has.
   A 1 × 8 = $8
   B 8 + 10 = $18
   C 8 × 10 = $800
   D 8 × 10 = $80

32.) Which of the following makes the equation true?
   \[2 \times \underline{\phantom{0}} = 22\]
   A 12
   B 10
   C 22
   D 11

33.) Mrs. King puts her class into teams. Each team has 6 students. There are 9 different teams. Circle the letter that correctly shows how many students are in Mrs. King’s class.
   A \[
   \begin{align*}
   6 \times 9 & = 54 \\
   10 \times 9 & = 90 \\
   90 - 6 & = 84
   \end{align*}
   \]
   B \[
   \begin{align*}
   6 \times 9 & = 54 \\
   6 \times 10 & = 60 \\
   60 - 9 & = 51
   \end{align*}
   \]
   C \[
   \begin{align*}
   6 + 9 & = 15 \\
   6 + 10 & = 16 \\
   16 - 6 & = 10
   \end{align*}
   \]
   D \[
   \begin{align*}
   6 \times 9 & = 54 \\
   6 \times 10 & = 60 \\
   60 - 6 & = 54
   \end{align*}
   \]

34.) Kaylee wrote that 9 × 8 = 80. What step did Kaylee forget to do in solving 9 × 8?
   A None, that is the correct answer.
   B She forgot to subtract the factor.
   C She didn’t think of 9 as 10.
   D She didn’t multiply 9 to 10.
35.) Circle the correct way to solve $7 \times 6$ using the Break Apart 6 Strategy.

A $\left( \begin{array}{c} 1 \\ \times 7 \end{array} \right) + \left( \begin{array}{c} 5 \\ \times 7 \end{array} \right)$

\[
\begin{array}{c}
7 + 35 \\
42
\end{array}
\]

B $\left( \begin{array}{c} 3 \\ \times 1 \end{array} \right) + \left( \begin{array}{c} 3 \\ \times 7 \end{array} \right)$

\[
\begin{array}{c}
3 + 21 \\
24
\end{array}
\]

C $\left( \begin{array}{c} 1 \\ \times 7 \end{array} \right) + \left( \begin{array}{c} 6 \\ \times 7 \end{array} \right)$

\[
\begin{array}{c}
7 + 42 \\
49
\end{array}
\]

D $\left( \begin{array}{c} 6 \\ \times 1 \end{array} \right) + \left( \begin{array}{c} 6 \\ \times 5 \end{array} \right)$

\[
\begin{array}{c}
6 + 30 \\
36
\end{array}
\]

36.) Marcus sold 6 pies at the fundraiser. Each pie costs $7. How much money did Marcus make?

A $13$

B $36$

C $42$

D $44$

37.) Matthew has 4 friends and wants to give each friend 4 notebooks. Circle the letter that correctly shows how many notebooks Matthew needs in all?

A $4 \times 4$

\[
\begin{array}{c}
8 + 8 \\
16 = 4 \times 4
\end{array}
\]

C $4 \times 4$

\[
\begin{array}{c}
4 + 8 \\
12 = 4 \times 4
\end{array}
\]

B $4 \times 4$

\[
\begin{array}{c}
4 + 4 \\
8 = 4 \times 4
\end{array}
\]

D $4 \times 4$

\[
\begin{array}{c}
16 + 16 \\
32 = 4 \times 4
\end{array}
\]

38.) Circle the letter that shows how Courtney correctly solved $4 \times 7$.

A $4 \times 7 = 11$

B $8 + 8 = 16$ so $4 \times 7 = 16$

C $14 + 14 = 28$ so $4 \times 7 = 28$

D $4 + 4 + 4 + 4 = 16$ so $4 \times 7 = 16$
39.) Sofia earns $11 a day for pet sitting. She worked a total of 7 days. Circle the letter that correctly shows how much money Sophia earned?

A  
$11 \times 7$
$(2 \times 11) + (5 \times 11)$
$22 + 55$
$77$

B  
$11 \times 7$
$(5 \times 7) + (6 \times 7)$
$35 + 36$
$71$

C  
$11 \times 7$
$(2 \times 5) + (11 \times 11)$
$10 + 121$
$131$

D  
$11 \times 7$
$(1 \times 11) + (7 \times 11)$
$11 + 77$
$88$

40.) Joshua sold 10 of his baseball cards for $4 each. How much money did Joshua get for his baseball cards?

A  $44$
B  $40$
C  $36$
D  $14$