ESTAR INTERVENTION

Tier 2 Mathematics Intervention

Module: *Multiplication & Division Relationships (MDR)*

Form B Assessment

Name _____

Date _____

Teacher _____

The Meadows Center for Preventing Educational Risk—Mathematics Institute
The University of Texas at Austin

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.

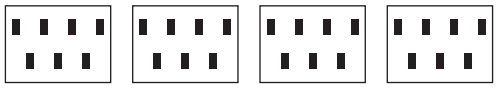
A 7 + 7 + 7 + 7 + 7 + 7 + 7

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.

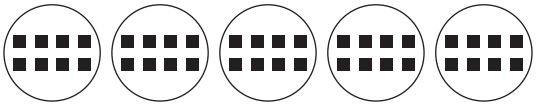
B 28 groups of 7 equals 4.

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



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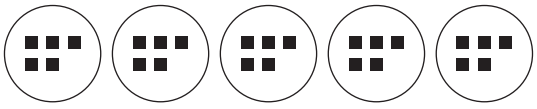
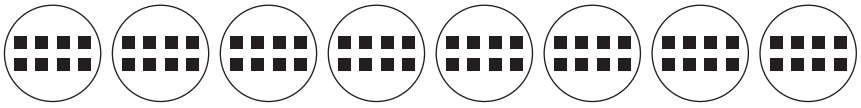
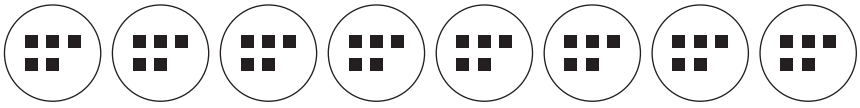


C



D



5.) Circle the answer of the multiplication equation for the repeated addition equation 6 + 6 + 6 = 18.

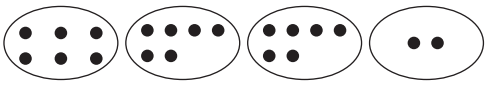
A 6 × 3 = 18

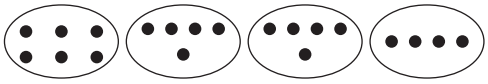
B 6 × 6 × 6 = 18

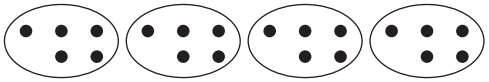
C 6 × 18 = 3

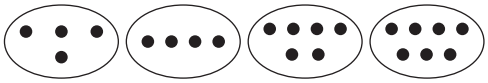
D 3 × 3 × 3 × 3 × 3 × 3 = 18

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.

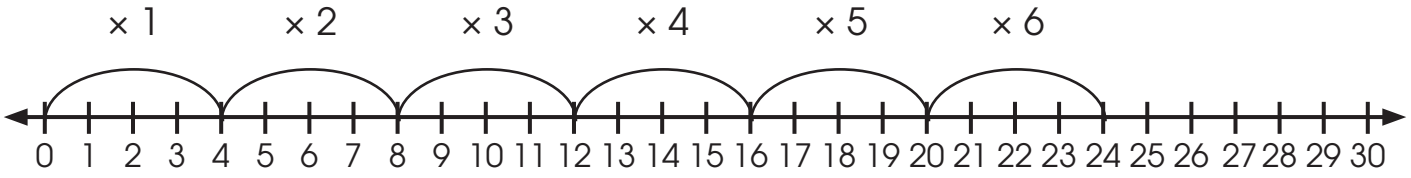
A 

B 

C 

D 

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



A 4 × 6 = 6

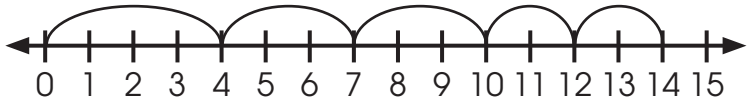
B 6 × 4 = 24

C 6 × 6 = 24

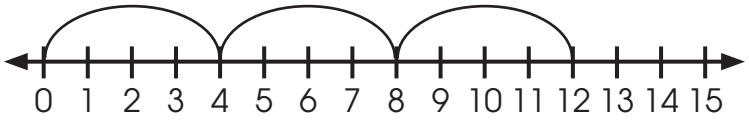
D 4 × 4 = 24

8.) Karen was asked to model 3 × 4 on the number line. Circle the answer that shows the correct model.

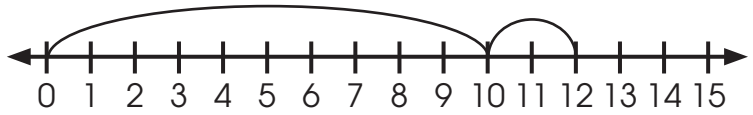
A



B

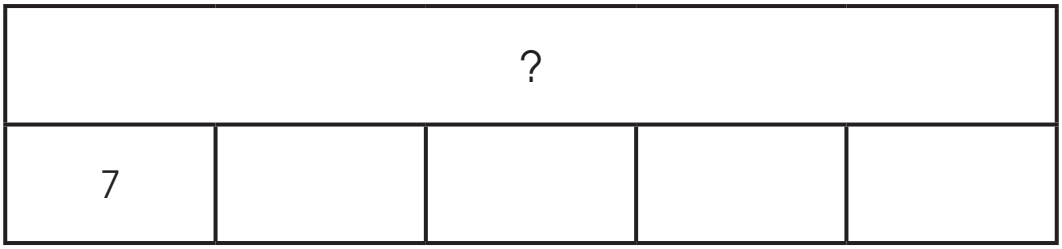


C



D

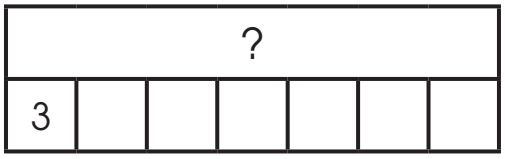
9.) Circle the multiplication equation for the bar model.



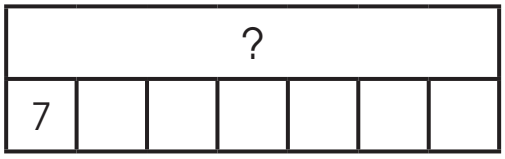
A 7 × 7 = 49
B 7 + 5 = 12
C 7 × 5 = 35
D 7 × 5 = 30

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.

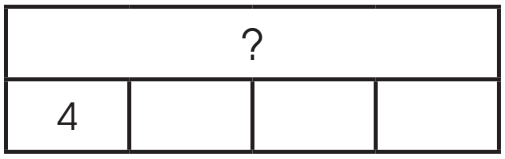
A 7×4



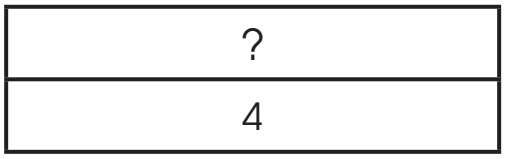
C 7×7



B 3×3

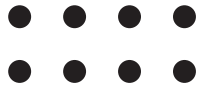


D 3×1



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

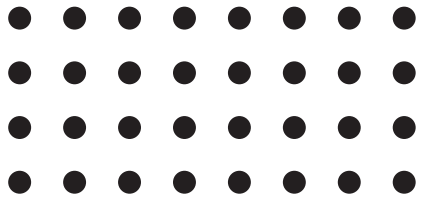


$4 \times 2 = 8$

C

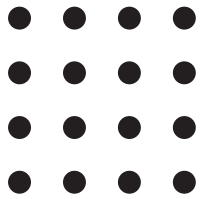
$8 \times 1 = 8$

B



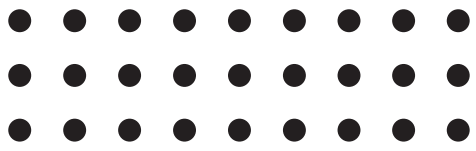
$4 \times 8 = 32$

D



$4 \times 4 = 16$

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



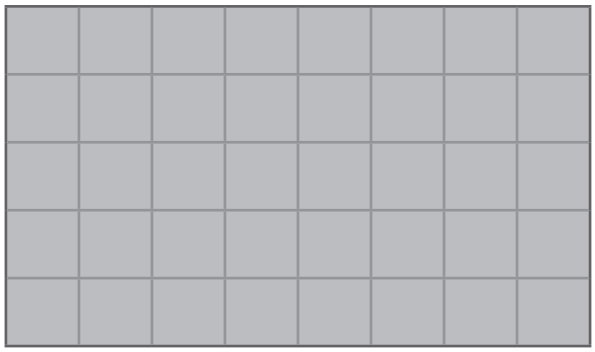
A $3 + 9 = 27$

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.



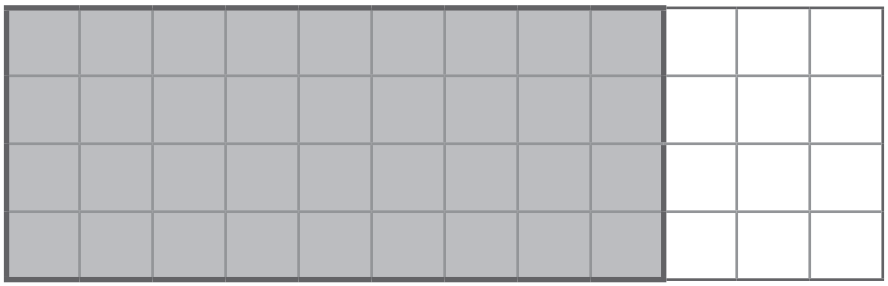
A $40 \times 1 = 40$

B $5 \times 8 = 40$

C $20 \times 2 = 40$

D $30 \times 10 = 300$

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?



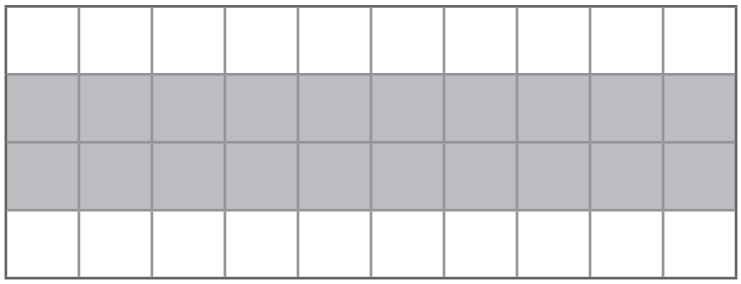
A 13 square units

B 18 square units

C 36 square units

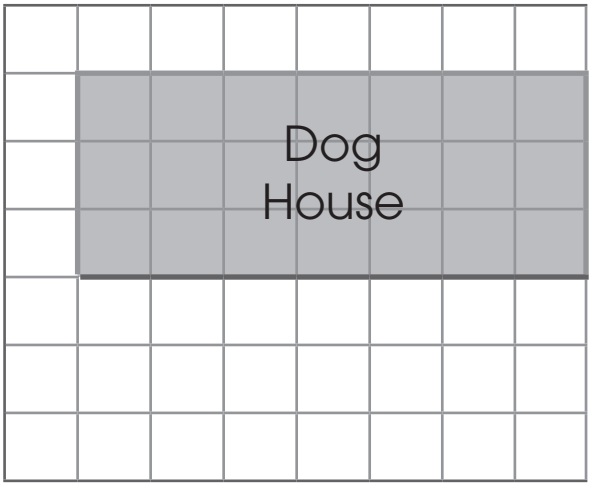
D 35 square units

15.) What is the shaded area of the area model?



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?



A 3 × 3
B 7 × 3
C 7 × 7
D 7 × 8

×	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

Solve using the multiplication table. Circle the correct answer.

17.) $\begin{array}{r} 6 \\ \times\ 8 \\ \hline \end{array}$

A 14 **B** 42 **C** 56 **D** 48

18.) 7 × 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.

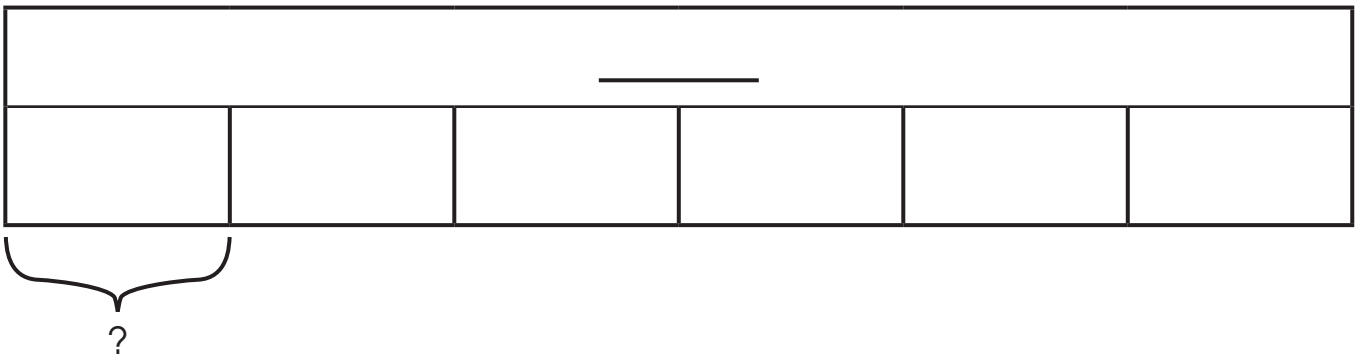
A 13 shared equally with 5 friends equals 2 per friend with 3 leftover.
B 5 shared equally with 13 friends equals 2 per friend with 3 leftover.
C 13 shared equally with 5 friends equals 1 per friend with 8 leftover.
D 5 shared equally with 13 friends equals 8 per friend with 0 leftover.

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.

24			
6	6	6	6

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

56			
14	14	14	14

C

56							
7	7	7	7	7	7	7	7

B

56							
8	8	8	8	8	8	8	8

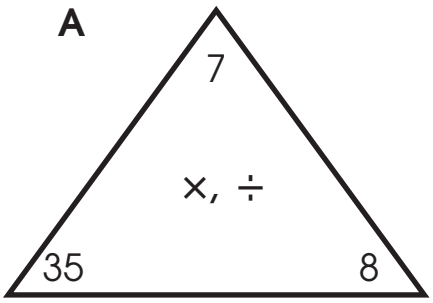
D

56						
7	7	7	7	7	7	7

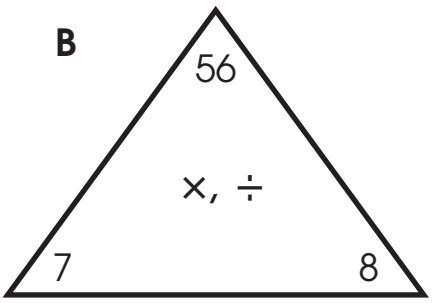
27.) Circle the correct number family triangle from the given number equation.

$8 \times 7 = 56$ $56 \div 8 = 7$

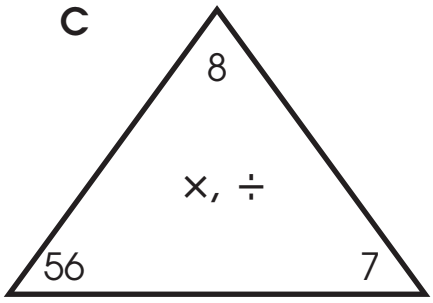
A



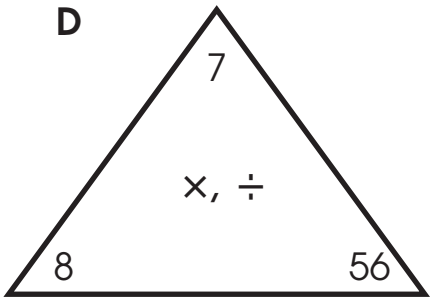
B



C



D



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 $1 \times 8 = \$8$

B $8 + 10 = \$18$

C $8 \times 10 = \$800$

D $8 \times 10 = \$80$

32.) Which of the following makes the equation true?

$$2 \times \square = 22$$

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
6×9
$10 \times 9 = 90$
$- \quad 6$
84 students

C
$6 + 9$
$6 + 10 = 16$
$- \quad 6$
10 students

B
6×9
$6 \times 10 = 60$
$- \quad 9$
51 students

D
6×9
$6 \times 10 = 60$
$- \quad 6$
54 students

34.) Kaylee wrote that $9 \times 8 = 80$. 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 × 6 using the Break Apart 6 Strategy.

A (1 × 7) + (5 × 7)
7 + 35
42

C (1 × 7) + (6 × 7)
7 + 42
49

B (3 × 1) + (3 × 7)
3 + 21
24

D (6 × 1) + (6 × 5)
6 + 30
36

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 × 4
8 + 8
16 = 4 × 4

C 4 × 4
4 + 8
12 = 4 × 4

B 4 × 4
4 + 4
8 = 4 × 4

D 4 × 4
16 + 16
32 = 4 × 4

38.) Circle the letter that shows how Courtney correctly solved 4 × 7.

A 4 × 7 = 11
B 8 + 8 = 16 so 4 × 7 = 16
C 14 + 14 = 28 so 4 × 7 = 28
D 4 + 4 + 4 + 4 = 16 so 4 × 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 × 7

(2 × 11) + (5 × 11)

22 + 55

$77

B

11 × 7

(5 × 7) + (6 × 7)

35 + 36

$71

C

11 × 7

(2 × 5) + (11 × 11)

10 + 121

$131

D

11 × 7

(1 × 11) + (7 × 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