Name _____

CC.4.OA.4 Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1–100 is prime or composite.

1. Which shows all the factors of 32?

A 1, 32

B 1, 2, 4, 8, 16, 32

C 1, 2, 16, 32

D 1, 2, 3, 4, 6, 8, 16, 32

2. Which shows all the factors of 63?

A 1, 63

B 1, 7, 9, 63

C 1, 3, 7, 9, 21, 63

D 1, 3, 6, 7, 9, 11, 21, 63

3. What are all of the factors of 18?

_____

4. Which shows all the factors of 72?

A 1, 2, 3, 4, 6, 7, 8, 9, 12, 15, 18, 24, 36, 72

B 1, 2, 4, 6, 8, 9, 12, 18, 36, 72

C 1, 2, 3, 4, 6, 12, 18, 24, 36, 72

D 1, 2, 3, 4, 6, 8, 9, 12, 18, 24, 36, 72

5. Which shows all the factors of 6?

A 6, 12, 18, 24

B 12, 3, 6

C 1, 2, 3, 6

D 2, 3

6. Which shows all the factors of 48?

A 1, 2, 3, 4, 6, 8, 12, 16, 24, 48

B 1, 2, 4, 6, 8, 12, 24, 48

C 1, 3, 4, 6, 8, 12, 16, 48

D 1, 2, 3, 4, 6, 8, 12, 16, 48

7. Which shows all the factors of 100?

A 1, 2, 4, 10, 25, 50, 100

B 1, 2, 4, 5, 6, 8, 10, 15, 20, 25, 35, 50, 100

C 1, 2, 4, 5, 6, 10, 15, 20, 25, 50, 100

D 1, 2, 4, 5, 10, 20, 25, 50, 100

8. Which number is a multiple of 6?

A 9

B 12

C 38

D 52

9. Tell whether 92 is a multiple of 8.

_____

10. Which number is a multiple of 7?

A 63

B 72

C 81

D 94

11. Which number is a multiple of 4?

A 10
B 18
C 24
D 30

12. Which number is a multiple of 9?

A 32
B 54
C 64
D 80

13. Which number is a multiple of 3?

A 36
B 41
C 56
D 65

14. Which number is prime?

A 49
B 33
C 15
D 2

15. Is the number 51 prime or composite?

_____

16. Which number is prime?

A 43
B 63
C 81
D 91

17. Which number is composite?

A 67
B 78
C 59
D 97

18. Is the number 47 prime or composite?

_____

19. Which number is composite?

A 23
B 89
C 79
D 93

20. Which number is prime?

A 9
B 12
C 13
D 33

21. Which number is composite?

A 28
B 43
C 61
D 97

Name _____

CC.4.OA.5 Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself.

1. Marissa uses this rule to create a pattern.

Start with the number 108 and subtract 13.

Write the first six numbers in Marissa's pattern. Then write a statement that describes the pattern.

_____

_____

_____

2. Ethan turns each figure $\frac{3}{4}$ turn to create this pattern.

What are the next two figures in the pattern?

A 

B 

C 

D 

3. Nikki uses shapes to create a repeating pattern.

What figure is missing in the pattern?

A 

B 

C 

D 

4. Use this rule to write the first 6 numbers in a pattern.

Start with the number 3. Multiply by 2.

What do you observe about the pattern?

_____

_____

_____

_____

5. Which number pattern shows the rule *subtract 4, multiply by 3*?

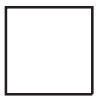
A 1, 7, 14, 21, 28, 35, 42

B 5, 1, 9, 5, 1, 9, 5

C 6, 2, 6, 2, 6, 2, 6

D 7, 4, 16, 13, 52, 49

6. Otto made a geometric pattern. He started with a triangle. Each figure in the pattern has one more side than the last figure. Following this pattern, what figure will be fourth in the pattern?

A 

B 

C 

D 

7. Look at the number pattern.

2, 5, 11, 23, 47, . . .

What is the rule for this pattern?

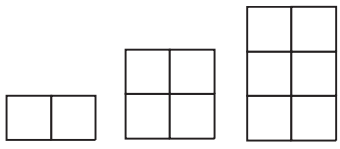
A add 4

B multiply by 6

C multiply by 3

D multiply by 2, then add 1

8. Dara used tiles to create the pattern.



Write the rule for the pattern. Then draw the next two figures.

_____

_____

9. Robyn created a number pattern using the rule *multiply by 2, then add 2*. She started with the number 1.

Write the first six numbers in the pattern. Then write a statement that describes the pattern.

_____

_____

_____

_____

10. Ned has a jar of nickels. He starts off with 6 nickels. Each day he adds nickels using the rule *add 3*. How many nickels does Ned add to his jar on the sixth day?

A 21 nickels

B 24 nickels

C 27 nickels

D 30 nickels

11. Which number pattern shows the rule *subtract 4*?

A 93, 89, 90, 86, 87, 83

B 32, 36, 40, 44, 48, 52

C 1, 4, 16, 64, 256, 1,024

D 28, 24, 20, 16, 12, 8

12. Which are the next two numbers in the pattern?

14, 38, 62, 86, . . .

A 100, 114

B 102, 114

C 110, 134

D 134, 158

Name _____

CC.4.NBT.5 Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

1. Serena collects stamps. She has 34 pages of stamps in her notebook. Each page has 18 stamps. How many stamps does she have in all?

A 512 stamps

B 612 stamps

C 632 stamps

D 642 stamps

2. Mrs. Brant's classroom has three bulletin boards—one for math, one for science, and one for reading. Each bulletin board has 24 vocabulary words posted. How many vocabulary words are posted in the classroom?

A 57 words

B 67 words

C 62 words

D 72 words

3. Kevin's class is selling stuffed animals after school to raise money for wildlife conservation. They have 200 stuffed animals that sell for $8 each. How much money will Kevin's class make if they sell all of the stuffed animals?

_____

4. The local science center has 4 aquariums that hold 1,099 liters of water each. How much water does the science center need to fill all 4 aquariums?

A 4,096 liters

B 4,169 liters

C 4,396 liters

D 4,496 liters

5. The concession stand at the baseball park sells 3,006 slices of pizza each night. How many slices of pizza will the concession stand sell in 7 nights?

_____

6. A box contains 24 ginger cookies. Each cookie contains 44 calories. Paul's dog ate an entire box of ginger cookies. How many calories did the dog eat?

A 1,036 calories

B 1,046 calories

C 1,056 calories

D 1,066 calories

7. Mrs. O'Connell is performing in a play for 6 nights. Each night, 5,050 people watch her perform. Which shows the total number of people who will watch Mrs. O'Connell perform?

A 30,030 people

B 30,300 people

C 33,000 people

D 33,030 people

8. Renee has art class for 60 minutes each week of the school year. There are 36 weeks of school. For how many minutes does she have art class during the school year?

A 216 minutes

B 266 minutes

C 2,160 minutes

D 2,660 minutes

9. This weekend, a local theater played a movie 4 times. The movie is 188 minutes long. How many minutes did the theater spend playing the movie this weekend?

_____

10. Anita took 8 photographs with her digital camera. Each photograph uses 105 megabytes of her camera's memory card. How many megabytes did she use for her photographs?

A 800 megabytes

B 804 megabytes

C 840 megabytes

D 940 megabytes

11. The 15 students in Anna's book group each take turns reading aloud from a novel. Each student reads aloud for 30 minutes. Which shows the total number of minutes the students will read aloud?

A 40 minutes

B 45 minutes

C 400 minutes

D 450 minutes

12. Dee made a fancy collar for each of her 4 dogs. She sewed 23 beads on each collar. How many beads did she sew on all the collars?

_____

13. Maria is planning a spaghetti dinner for 34 guests. She needs to cook 4 ounces of spaghetti for each guest. How many ounces of spaghetti will Maria need to feed all of her guests?

A 38 ounces

B 126 ounces

C 136 ounces

D 140 ounces

Name _____

CC.4.NBT.6 Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

1. Noah's school bought 5 computers for a total of $4,685. Each computer cost the same amount of money. How much money did the school spend on each computer?

A $931

B $937

C $951

D $957

2. Marta has 102 feet of rope She cuts the rope into equal lengths of 9 feet. How many feet of rope does Marta have left? Explain your reasoning.

_____

_____

_____

_____

_____

_____

3. Sarah's mother is buying apples to make apple pies. The apples cost $3 per pound. Sarah's mother has $40. How many pounds of apples can her mother buy?

A 13 pounds

B 14 pounds

C 15 pounds

D 16 pounds

4. The dairy cows on Mr. Aaron's farm eat 9,315 pounds of grain in 3 months. How many pounds of grain will the cows eat in one month?

A 3,005 pounds

B 3,105 pounds

C 3,115 pounds

D 3,150 pounds

5. Steven, Karen, and Jesse agreed to volunteer a total of 213 hours at the children's museum. The three friends plan to divide the time equally. How many hours will each child volunteer?

A 41 hours

B 51 hours

C 61 hours

D 71 hours

6. Chelsea needs to put 514 drinking glasses into boxes. Each box holds 6 glasses. How many boxes will Chelsea need? Explain your reasoning.

_____

_____

_____

_____

_____

7. Alita needs to organize 96 markers. She sorts them into groups with 4 markers in each group. How many groups will she make?

A 21 groups

B 22 groups

C 23 groups

D 24 groups

8. Janet and Ricardo are setting up chairs for the school talent show. They have to set 8 chairs in each row. They have 211 chairs. How many rows of chairs can they set up? Explain your reasoning.

_____

_____

_____

_____

_____

9. There are 5 fourth-grade classes going to the zoo. In all, there are 145 students, with the same number of students in each class. How many students are in each class?

A 31 students

B 30 students

C 29 students

D 28 students

10. Samantha has 1,303 beads. She wants to make necklaces that each have 7 beads. How many necklaces can she make?

A 171 beads

B 172 beads

C 186 beads

D 187 beads

11. An environmental group raised $8,796 to give to charities. The group gave an equal amount of the money to 3 different charities. How much money did each charity receive?

A $2,632

B $2,892

C $2,902

D $2,932

12. Sadie's family is touring monuments in Washington, D.C. They plan to see a total of 41 monuments. If they tour 4 monuments each day, how many days will it take to see 41 monuments? Explain your reasoning.

_____

_____

_____

_____

_____

_____