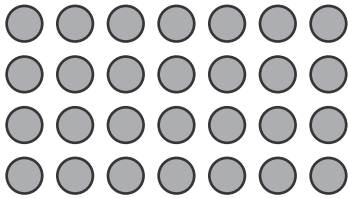


Name _____

1. **A.** Tyrone wrote a multiplication fact and a division fact for the array below. Select all of the equations that show a fact Tyrone could have written. **1 point**



- $4 \times 6 = 24$
 $7 \times 4 = 28$
 $28 \div 4 = 7$
 $8 \times 4 = 32$
 $32 \div 4 = 8$

- B.** Look at the multiplication fact you selected in **Part A**. Which of these is a way to rewrite the product in it?

- A** $(4 \times 3) + (4 \times 4)$ **1 point**
 B $(4 \times 4) + (4 \times 2)$
 C $(4 \times 2) + (4 \times 8)$
 D $4 \times 4 \times 7$

2. Corey wrote three equations. What number will make all of Corey's equations true? **1 point**

$? \times 9 = 54$

$42 \div 7 = ?$

$48 \div ? = 8$

6

3. If a group of objects is divided into 2 equal groups, none are left over. Is the total number of objects even or odd? What could the total number of objects be? Use a drawing to explain. **2 points**

**The total number of objects is even;
 Sample answer: 10 objects total;
 Check students' work.**

4. Mrs. Jefferson wrote the expression 7×3 on the board. Which of the following expressions has the same value? **1 point**

- A** $(3 \times 3) + (3 \times 2)$
 B $(7 \times 2) + (7 \times 1)$
 C $(7 \times 0) + (7 \times 4)$
 D $(4 \times 3) + (4 \times 3)$

5. A. Levi is buying used books. He buys 5 hardcover books and 2 paperback books. He spends \$28. If the books are all the same price, how much does each book cost? **1 point**

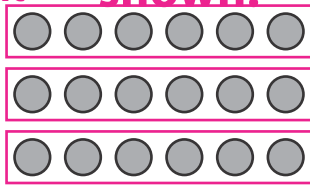
\$4

- B. Levi decides to buy more books that cost another \$16 in all. How many more books does Levi buy? **1 point**

4 books

6. Look at the counters below.

- A. Draw lines around the counters to show $18 \div 6$. **Sample drawing shown.**
1 point



- B. Write a multiplication fact related to the drawing you completed in Part A. **1 point**

$3 \times 6 = 18$

7. Match each expression on the left with an equivalent expression. **1 point**

| | $8 \div 8$ | 6×0 | 7×1 | 1×6 |
|-------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| $0 \div 8$ | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| $36 \div 6$ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| $4 \div 4$ | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| $35 \div 5$ | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

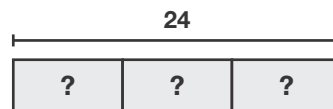
8. A. Sam wrote five numbers. Which of Sam's numbers can be divided into 6 equal groups with 0 left over? Select all that apply. **1 point**

- 60 48 32
 54 27

- B. How can you check to make sure the numbers you chose are divisible by 6? **1 point**

- (A) Check that each number is even.
(B) Check that each number is odd.
(C) Use multiplication to multiply 0 by a number to determine if it is equal to the number you chose.
(D) Use multiplication to multiply 6 by a number to determine if it is equal to the number you chose.

9. Lizzie drew this bar diagram to model a division problem. Write a multiplication equation Lizzie could use to help solve the problem. **1 point**



$3 \times 8 = 24$

10. A. Jerome divided his baseball card collection into 2 equal groups. Which describes the number of baseball cards Jerome has? **1 point**
- A It is an even number.
 - B It is an odd number.
 - C It is neither an odd or even number.
 - D It is both an odd and even number.

- B. Jerome finds 2 more baseball cards. Select all statements that are true. **1 point**

- Including the baseball cards he found, Jerome has an even number of baseball cards.
- Jerome has an odd number of baseball cards.
- Jerome can divide all of the baseball cards into 2 equal groups.
- Jerome could now have a total of 6 baseball cards in his collection.
- Jerome could now have a total of 8 baseball cards in his collection.

11. Taylor is trying to find $8 \div 1$. She says the answer is 1 because $8 \times 1 = 1$. Is Taylor correct? Explain. **2 points**

No; Sample answer: Taylor is not correct. The correct answer is that $8 \div 1 = 8$ since $8 \times 1 = 8$.

12. Carlos has 49 pencil toppers. He sorts his pencil toppers into 7 equal groups.

- A. Write an expression that represents how many pencil toppers are in each group. **1 point**

$$49 \div 7$$

- B. How many are in each group? **1 point**

7

13. On her trip, Cybil sent 56 postcards. She sent the same number of postcards to each of 8 friends. How many postcards did Cybil send to each friend? Use the bar diagram to help. **1 point**



- A 6
- B 7
- C 8
- D 9

14. Angela has 5 classes. For each class, she needs 2 folders. Find how many folders she needs in all. Then write the fact family related to this situation. **2 points**

10 folders in all;
 $2 \times 5 = 10,$
 $5 \times 2 = 10,$
 $10 \div 5 = 2,$
 $10 \div 2 = 5$

15. A. Richard wrote 3 true statements about even and odd numbers. Select all of the true statements. **1 point**

- An even number times an odd number has an odd product.
- All even numbers are multiples of 2.
- The product of 5 and any number is always odd.
- The product of two even numbers is even.
- An odd number cannot be divided by 2 with none left over.

- B. Look at the statements you did **NOT** select in **Part A**. For each, give an example of why it is not true. **1 point**

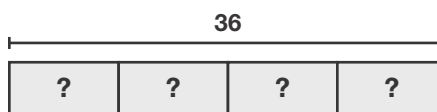
Sample answer:
4 is even and 3 is odd, but $4 \times 3 = 12$ and 12 is even. The product of 5 and 2 is 10, which is even.

16. Which number makes both equations true? **1 point**

$$27 \div 9 = ? \quad 9 \times ? = 27$$

3

17. Anna drew the bar diagram below. Write two equations that could be used to represent the problem shown in Anna's bar diagram. Then solve the equations. **2 points**



$36 \div 4 = ?;$
 $4 \times ? = 36;$
 $? = 9$

18. Miriam has 3 packages of pencils. Each package has 6 pencils. She needs an eraser for each pencil. How many erasers will she need to buy? **2 points**

Tell which operations you will use. Then solve the problem.

Sample answer:
Multiplication;
 $3 \times 6 = 18;$ She needs 18 erasers.