

ALGEBRA

Lesson 4.7

Name _____

Patterns on the Multiplication Table

COMMON CORE STANDARD CC.3.OA.9

Solve problems involving the four operations, and identify and explain patterns in arithmetic.

Is the product even or odd? Write *even* or *odd*.

1. $2 \times 7 =$ even **Think:** Products with 2 as a factor are even. 2. $4 \times 6 =$ _____ 3. $8 \times 3 =$ _____
4. $2 \times 3 =$ _____ 5. $9 \times 9 =$ _____ 6. $5 \times 7 =$ _____ 7. $6 \times 3 =$ _____

Use the multiplication table. Describe a pattern you see.

8. in the column for 5

9. in the row for 10

10. in the rows for 3 and 6

×	0	1	2	3	4	5	6	7	8	9	10
0	0	0	0	0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6	7	8	9	10
2	0	2	4	6	8	10	12	14	16	18	20
3	0	3	6	9	12	15	18	21	24	27	30
4	0	4	8	12	16	20	24	28	32	36	40
5	0	5	10	15	20	25	30	35	40	45	50
6	0	6	12	18	24	30	36	42	48	54	60
7	0	7	14	21	28	35	42	49	56	63	70
8	0	8	16	24	32	40	48	56	64	72	80
9	0	9	18	27	36	45	54	63	72	81	90
10	0	10	20	30	40	50	60	70	80	90	100

Problem Solving

11. Carl shades a row in the multiplication table. The products in the row are all even. The ones digits in the products repeat 0, 4, 8, 2, 6. What row does Carl shade?

12. Jenna says that no row or column contains products with only odd numbers. Do you agree? **Explain.**

Lesson Check (CC.3.OA.9)

1. Which has an even product?

- (A) 1×9
- (B) 3×3
- (C) 5×7
- (D) 4×9

2. Which describes this pattern?

10, 15, 20, 25, 30

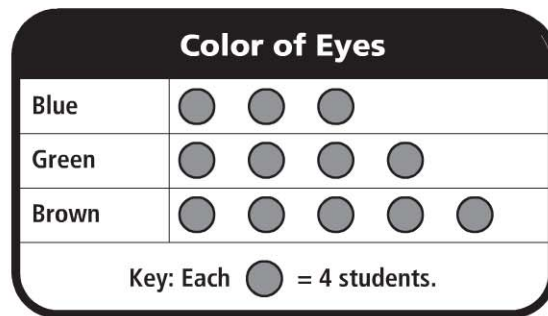
- (A) Even and then odd
- (B) Add 10.
- (C) Subtract 5.
- (D) Multiply by 5.

Spiral Review (CC.3.OA.3, CC.3.OA.5, CC.3.NBT.2, CC.3.MD.3)

3. Lexi has 2 cans of tennis balls. There are 3 tennis balls in each can. She buys 2 more cans. How many tennis balls does she now have in all? (Lesson 4.6)

- (A) 12
- (B) 9
- (C) 7
- (D) 6

4. Use the picture graph.



How many students have green eyes? (Lesson 2.2)

- (A) 4
- (B) 8
- (C) 12
- (D) 16

5. Sasha bought 3 boxes of pencils. If each box has 6 pencils, how many pencils did Sasha buy in all? (Lesson 4.3)

- (A) 9
- (B) 12
- (C) 18
- (D) 24

6. Find the sum. (Lesson 1.7)

$$\begin{array}{r} 219 \\ + 763 \\ \hline \end{array}$$

- (A) 992
- (B) 982
- (C) 976
- (D) 972