Arithmetic Patterns

Grade 3 Math Worksheet - Challenge Me

Name _____ Date _____

Circle the answer.

1. Sam adds three odd numbers: 3 + 5 + 7. Is the sum even or odd? Why?

   even, because odd numbers always add to an even number

   odd, because any sum of odd numbers is odd

   even, because 3 + 5 + 7 is 16

   odd, because odd + odd is even, then even + odd is odd

2. Without multiplying, how do you know 5 × 9 is odd?

   one factor is even 5 + 9 is an even number every 5s product ends in 5

   both factors are odd

3. Which number goes in the empty box?

   81 72 63 ☐ 45

   64 52 55 54

4. Tia says 6 × 7 is odd because 7 is odd. Is she right?

   Yes, 6 × 7 is 43, which is odd

   No, 6 × 7 is even because 6 is even

   No, 6 × 7 is even because 7 is odd

   Yes, an odd factor always makes an odd product

5. On a hundred chart, start at 47. Move down one row, then two squares left. Where do you land?

   55 65 45 59

6. A pattern starts at 3 and adds 4 each time. Why is every number odd?

- even plus even is always odd
- odd plus even is always odd
- odd plus odd is always odd
- adding 4 makes any number odd

7. Kim says every product in the 6s row is even. Which reason proves it?

- every 6s product ends in 6
- the other factor is always even
- 6 is even, and an even factor makes an even product
- 6 × 3 = 18, and 18 is even

8. What rule fits this pattern?

2 6 18 54

- add 4 each time
- add 12 each time
- multiply by 3 each time
- multiply by 2 each time

9. What are the next two numbers in this pattern?

3 7 11 15 19

- 21, 23
- 23, 28
- 23, 27
- 22, 25

10. The 3s row and the 3s column of a multiplication table have the same numbers. Why?

- every number in the 3s row is odd
- each row is 3 more than the last
- 3 × 5 is the same as 5 × 3
- 3 × 5 is the same as 3 + 5

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Answer Key - Grade 3 Math Worksheet - Challenge Me

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