Arithmetic Patterns

Grade 3 Math Worksheet - Challenge Me

Name _____ Date _____

Circle the answer.

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

   No, 6 × 7 is even because 7 is odd

   No, 6 × 7 is even because 6 is even

   Yes, an odd factor always makes an odd product

   Yes, 6 × 7 is 43, which is odd

2. Look at the ones digits of the 8s row: 8, 16, 24, 32, 40. What pattern do they make?

   0, 2, 4, 6, 8 8, 7, 6, 5, 4 8, 4, 2, 6, 0 8, 6, 4, 2, 0

3. Which number is in both the 4s row and the 6s row?

   30 24 16 18

4. What rule fits this pattern?

   2 6 18 54

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

   add 4 each time

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

   the other factor is always even

   6 is even, and an even factor makes an even product

   every 6s product ends in 6

   6 × 3 = 18, and 18 is even

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

   3 × 5 is the same as 5 × 3

   each row is 3 more than the last

   3 × 5 is the same as 3 + 5

   every number in the 3s row is odd

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

adding 4 makes any number odd

odd plus even is always odd

even plus even is always odd

odd plus odd is always odd

8. Which number goes in the empty box?

81 72 63 ☐ 45

52 64 55 54

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

both factors are odd one factor is even 5 + 9 is an even number

every 5s product ends in 5

10. The digits of a 9s product add to 9. Which number could be in the 9s row?

53 64 73 63

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Answer Key - Grade 3 Math Worksheet - Challenge Me

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