Arithmetic Patterns

Grade 3 Math Worksheet - Challenge Me

Name _____ Date _____

Circle the answer, or write the answer on the line.

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

   the other factor is always even

   6 × 3 = 18, and 18 is even

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

   every 6s product ends in 6

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

   adding 4 makes any number odd

   even plus even is always odd

   odd plus even is always odd

   odd plus odd is always odd

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

   18 16 24 30

4. A pattern starts at 100 and subtracts 7 each time. What is the fourth number?

   _____

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

   53 64 73 63

6. Which number goes in the empty box?

   81 72 63 ☐ 45

   52 55 54 64

7. What rule fits this pattern?

   2 6 18 54

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

   add 4 each time

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

3 × 5 is the same as 3 + 5

every number in the 3s row is odd

3 × 5 is the same as 5 × 3

each row is 3 more than the last

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

odd, because any sum of odd numbers is odd

even, because odd numbers always add to an even number

even, because 3 + 5 + 7 is 16

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

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

one factor is even

both factors are odd

5 + 9 is an even number

every 5s product ends in 5

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Answer Key - Grade 3 Math Worksheet - Challenge Me

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