

Multiplication and Division Explain Your Reasoning Challenge Cards **Answers**

1. I can double any number but I can only halve some numbers. Why? Explain your answer.

Any number can easily be doubled as you are making the number greater. When halving some numbers (odd numbers in particular), you will have an uneven amount. Some Year 1 children may understand that this remaining number could also be halved. E.g. Half of 5 is $2\frac{1}{2}$ or 2.5

2. You cannot halve an odd number. True or false? Explain your reasoning. **False. You can halve an odd number but you are not left with a whole number. For example, half of 7 is $3\frac{1}{2}$.**

(Within the context of the Year 1 curriculum, some children may answer true to this question. If they can justify that it is because you are left with one number or an uneven amount then that answer is acceptable.)

3. If you halve an even number it will always make an even number. True or false? Explain your answer.

False. Half of 10 = 5 and half of 6 = 3. You can halve some even numbers to make even numbers e.g. half of 8 = 4 but not all.

4. If you start at 0 and count up in tens, you will say the number 55. True or false? Explain your reasoning.

False. 55 is not a multiple of 10. 0, 10, 20, 30, 40, 50, 60.

5. 5, 10, ?, 20, 25, ?, ? What are the missing numbers? If you carry on this sequence, you will say the number 65. Am I correct? Explain your answer.

Missing numbers: 15, 30 and 35. Yes you will say the number 65. It is a multiple of 5.

6. Are there any numbers that are multiples of 5 and 10? How do you know? Explain your reasoning.

Multiplication and Division Explain Your Reasoning Challenge Cards **Answers**

Yes, all multiples of 10 are also multiples of 5 e.g. 10, 20, 30, 40, 50, 60 etc.

7. Janet is counting in twos. She counts the number 17. Has she counted correctly? How do you know?

No, because the number 17 is an odd number and all multiples of two are even. 0, 2, 4, 6, 8, 10, 12, 14, 16, 18

8. Sayeed says, "I know the number 20 is in the ten times table, so it is also in the two times table." Is he correct? Explain your reasoning.

The number 20 is in the ten and two times table. 0, 10, 20, and 0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20.

Children may also explain that it is in the ten times table because it has zero ones and in the two times table because it is an even number.

9. Jessica says, "I know the number 15 is in the five times table, so it is also in the ten times table." Is she correct? Explain your answer.

No, 15 is a multiple of 5 but is not a multiple of 10.

Children may explain that 15 doesn't have zero ones so can't be in the ten times table.

10. If I count down from 100 in tens, I will say the number 30. True or false? Explain your reasoning.

True. 30 is a multiple of 10. 100, 90, 80, 70, 60, 50, 40, 30