Name: _____ Date: _____

Common factors

Write the answer in the box. Some answers have a pick list.



1. The overlap for “Factors of 20” and “Factors of 30” contains 1, 2, 5, 10, 20. Which card must be moved out of the overlap?

   💡 Hint: List the factors of each number. Which ones are in both lists?

   20

2. The overlap for “Factors of 36” and “Factors of 48” contains 1, 2, 3, 4, 6, 12, 36. Which card must be moved out of the overlap?

   💡 Hint: List the factors of each number. Which ones are in both lists?

   36

3. Tao says 1 is the only common factor of 16 and 27. Is he right? Show how you know.

   💡 Hint: List the factors of each number. Which ones are in both lists?

   Yes. The common factors are 1.

4. Jo puts 14 outside both circles labelled Factors of 28 and Factors of 42. Is that correct? Give its region and show why.

   💡 Hint: List the factors of each number. Which ones are in both lists?

   It belongs in both. 14 × 2 = 28, and 14 × 3 = 42.

5. The overlap for “Factors of 18” and “Factors of 24” contains 1, 2, 3, 6, 18. Which card must be moved out of the overlap?

   💡 Hint: List the factors of each number. Which ones are in both lists?

   18

6. Tao says 1 is the only common factor of 18 and 24. Is he right? Show how you know.

   💡 Hint: List the factors of each number. Which ones are in both lists?

   No. The common factors are 1, 2, 3, 6.

7. Choose two different class sizes from 10 to 50, inclusive. Both classes must be able to make full teams of 7. Show the two multiplications.

   💡 Hint: List the factors of each number. Which ones are in both lists?

   7 × 3 = 21 and 7 × 5 = 35.

8. Two classes have 12 and 20 pupils. Each class is split into groups of the same size, with at least 2 pupils per group. What is the largest possible group size?

   💡 Hint: List the factors of each number. Which ones are in both lists?

   4

9 Two classes have 15 and 25 pupils. Each class is split into groups of the same size, with at least 2 pupils per group. What is the largest possible group size?

💡 Hint: List the factors of each number. Which ones are in both lists?

5

10 Choose two different class sizes from 10 to 50, inclusive. Both classes must be able to make full teams of 6. Show the two multiplications.

💡 Hint: List the factors of each number. Which ones are in both lists?

6 × 3 = 18 and 6 × 5 = 30.