#### Problem Solving-Level 3

# **Locomotive** Magic

#### **Problem One**

Cog A is turned anticlockwise four full turns.

- a. How many full turns will cog C make?
- **b**. In which direction will it turn?



#### **Problem Two**

This domino doughnut has a total of nine dots along each side.

Use the same dominoes to make a domino doughnut that has 12 dots along each side.

Din

Litres

Corr

## **Problem Three**

A farmer, a fox, a chicken, and a bag of corn need to get across the river in a boat.

The boat can hold the farmer and one other thing. Sadly, the fox cannot be left alone with the chicken and the chicken cannot be left alone with the corn. How will the farmer get everything across the river in the boat?

### **Problem Four**

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Jan needs exactly 5 litres of water. She has only these two containers. How can Jan use her containers to measure exactly 5 litres of water?

Applying problem-solving strategies

7 Litres