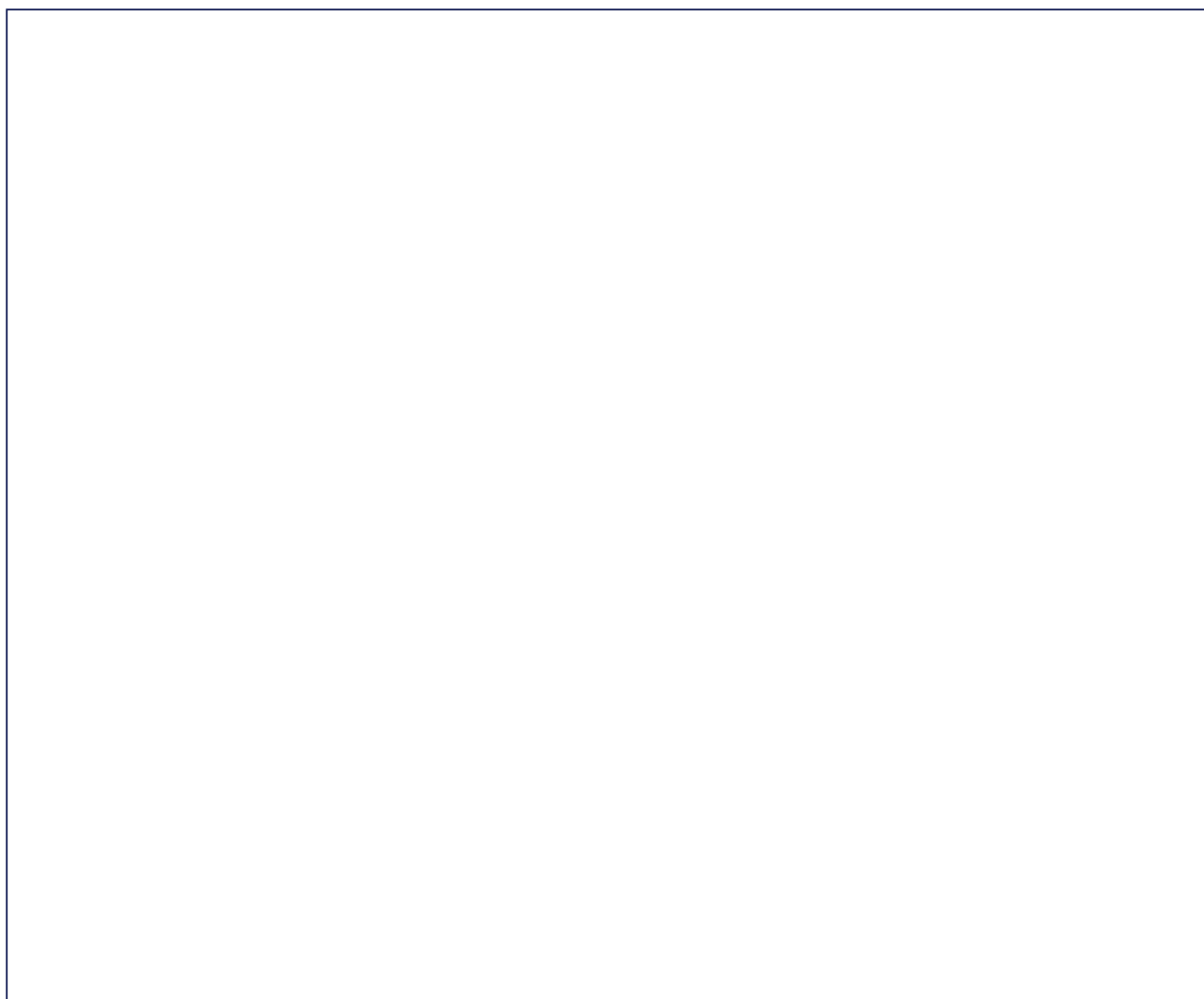


Max's Christmas Market Calculations

Learning objective: To apply mathematical reasoning to solve multi-step problems involving money, estimation, and geometric pattern recognition within a festive context.

Help Max the monkey organise his stall at the Winter Fair. Follow the drawing prompts to build your scene, then use your mathematical skills to answer the questions below. Ensure your labels are clear and your calculations are accurate.

Draw: Draw a bustling Christmas Market scene. In the centre, draw Max's stall decorated with geometric patterns. Include a symmetrical display of star-shaped decorations hanging from the stall roof. Around the stall, draw three stalls of different rectangular sizes, ensuring the perimeters are clearly labelled. Use a ruler to ensure your shapes have precise angles. Add festive details like snowflakes (using rotational symmetry) and twinkling lights arranged in parallel lines.



Label words: Symmetry · Perimeter · Profit · Expenditure · Acute angle · Parallel lines · Estimate · Budget

Steps:

1. Max buys 15 boxes of festive ribbons for £2.40 each. He sells them for £4.00 each. Calculate his total profit if he sells all 15 boxes. Show your working out.
2. Max wants to create a triangular festive banner. If the base of one triangular pennant is 15cm and the

height is 20cm, calculate the area of one pennant.

3. If Max has a budget of £50.00 and spends £36.75 on decorations, how much change should he receive? Explain why it is important for Max to track his expenditure.

4. Compare and contrast the shapes of the snowflakes you drew. Justify why they demonstrate the mathematical concept of symmetry.

5. What might happen to Max's profit margin if the cost of his materials increased by 20%? Justify your prediction.

6. Design a new geometric star for the stall that contains at least two acute angles and one pair of parallel lines. Label the angles.