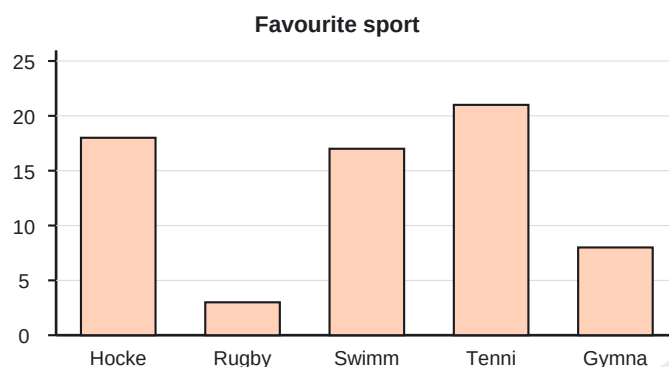


MATHEMATICS AND STATISTICS — 30 QUESTIONS

Multiple choice · 40 minutes

Work through the questions in order, but do not spend too long on any one. Mark your best answer for every question, then check your work against the worked solutions.

1. The graph shows the favourite sport of students in a class. Which sport is the most popular?



- A Hockey
- B Swimming
- C Rugby
- D Tennis

2. Which unit is best for measuring the mass of a paperclip?

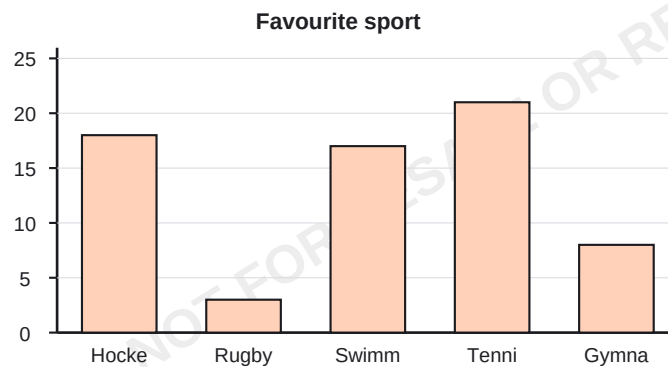
- A mg
- B g
- C t
- D kg

3. The letter b becomes the letter d when it is flipped over a vertical line. Which transformation is this?

- A enlargement
- B rotation
- C reflection
- D translation

THE WORKED ANSWERS TO THOSE 3 QUESTIONS

1. The graph shows the favourite sport of students in a class. Which sport is the most popular? [Bar graphs]



Correct answer: D — Tennis

- The tallest bar shows the most popular choice.
- Tennis has the tallest bar (21).
- Why the other options are wrong:
 - A (Hockey): That bar is not the tallest.
 - B (Swimming): That bar is not the tallest.
 - C (Rugby): That bar is not the tallest.

Skill: Bar graphs

KEY TAKEAWAY

The tallest bar shows the most common category.

2. Which unit is best for measuring the mass of a paperclip? [Choosing units]

Correct answer: B — g

- Think about the size of what you are measuring.
- The best unit is g.
- Why the other options are wrong:
 - A (mg): That unit is much too small for this measurement.
 - C (t): That unit is much too large for this measurement.
 - D (kg): That unit is much too large for this measurement.

Skill: Choosing units

KEY TAKEAWAY

Choose the unit that gives a sensible number for the size of the thing being measured.

3. The letter b becomes the letter d when it is flipped over a vertical line. Which transformation is this? [Transformations]

Correct answer: C — reflection

- Think about what happens to the shape: sliding is a translation, flipping is a reflection, turning is a rotation.
- This is a reflection.
- Why the other options are wrong:
 - A (enlargement): That is not what happens: enlargement means making the shape bigger or smaller.
 - B (rotation): That is not what happens: rotation means turning about a point.
 - D (translation): That is not what happens: translation means sliding.

Skill: Transformations

KEY TAKEAWAY

Translation = slide, reflection = flip, rotation = turn.