

Lesson 51 MEASURES

Estimating and measuring the area of irregular shapes

WHAT THIS LESSON TEACHES

To estimate the area of an irregular shape count whole squares inside then add part-squares using the more-than-half rule.

- A leaf covers 20 whole squares and 7 part-squares.
- A paw print covers 15 whole squares and 5 part-squares.

MODEL THIS ON THE BOARD

ESTIMATE A LEAF AREA ON GRID

- 1 Count all whole squares inside the outline: there are 24.
- 2 Count part-squares along the edge and keep only those more than half full: there are 8.
- 3 Add the totals to get the estimated area: 24 plus 8.

ANSWER KEY

a) 51 cm²b) 25 cm²c) 20 cm²Q1: 17.5 cm²Q2: 30½ cm²Q3: 17.5 cm²Q4: 42.5 cm²

a) **Always** — Curved edges mean part-squares make it impossible to be exact.

b) **Never** — Different choices on borderline part-squares can change the total.

c) **Never** — Only part-squares more than half are counted.

d) **Never** — No straight sides means the formula cannot be used.

EXTENSION SHEET · STRETCH ANSWERS

S1: 63.89 m²S2: 168 m²S3: 240 m²S4: 306 m²S5: 201 m²