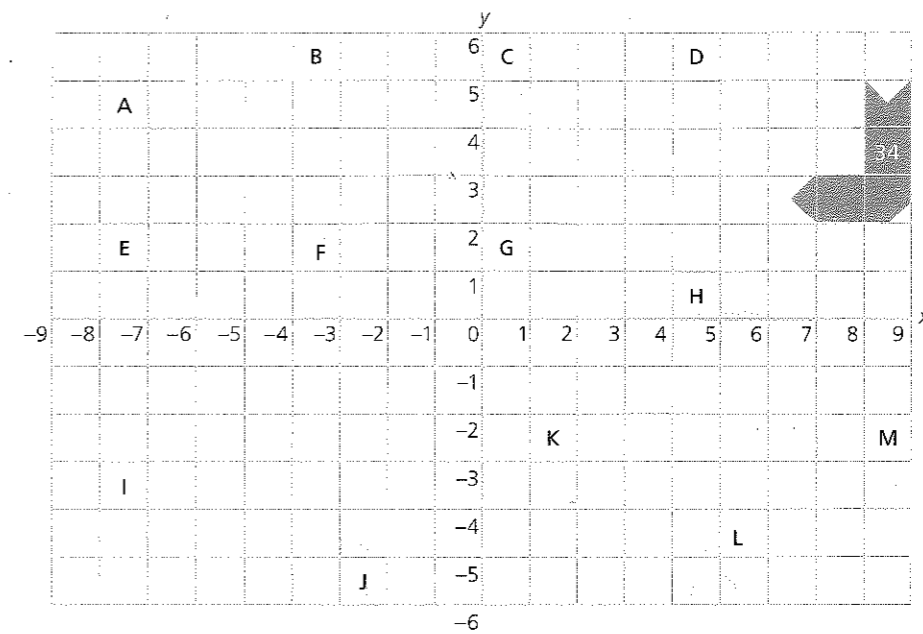1 Write down the remainder when the square of 8 is divided by 12.   r 4

2 $\frac{2}{3}(65 - 56) =$ 6

3 What is the value of $2^7 \div 2^4$?   8

4 Share £550 in the ratio 5:6.   £250 : £300

5 Write 24% of 35 as a decimal.   8.4

6 $325 \times 0.1 =$ 32.5

7 $2 \times 0.2 \times 0.02 =$ 0.008

8 0.00398 becomes 0.004 when rounded to three
   significant figures.   True or false?   false

9 $\frac{1}{2} < \frac{27}{36} < \frac{5}{6}$.   True or false?   true

10 If $a = 2$, $b = 3$, $c = 0$, find the value of $a^3 - \frac{bc}{a}$.   8

11 $\frac{27}{x^2} = x$, so $x =$ 3

12 Write the next three terms of the sequence.
    2, 3, 5, 7, 11, 13, 17, 19,   ,   ,   23, 29, 31

13 If I buy 40l of petrol at 64.5p per litre, how much
    change will I get from £30?   £4.20

14 The price of a car costing £12 450 rises by 4%.
    What is the new price of the car?   £12 948

15 Which is the larger quantity, a 2 litres or b half a gallon?   b

16 Which is the longer length, a 2 metres or b 6 feet?   a

17 A TV programme begins at 11.35 p.m. and ends at a quarter
    to two in the morning. How long is the programme?   130min

18 Freya runs 100m in 12s. What is her speed in kilometres per hour?   30km/h

19 A delivery van has a load space measuring 1.8m wide, 2m high
    and 2.4m long. How many parcels each measuring
    50cm × 60cm × 80cm can be fitted inside?   36

20 A parallelogram is drawn so that its smallest angle is one
    third the size of its largest angle. How big is the largest angle?   135°

21 Which letters of the word TORCH have one and only
    one axis of symmetry?   T, C

22 Find the area of a garden measuring 11.85m long and
    6.05m wide to the nearest square metre.   72m²

23 A point P has coordinates (−2, 5). It is translated by the
    mapping $(x, y) \rightarrow (x + 3, y + 3)$. What are the new coordinates of point P?   (1, 8)

24 On a map of scale 1:50 000, two towns are 12cm apart.
    What is the actual distance between the two towns in kilometres?   6km

25 12 coloured balls are placed in a bag. Three are red, four are blue
    and the remainder are green. If one ball is taken from the bag,
    what is the probability that it will be green? $\frac{5}{12}$

26 Write down the coordinates of each corner of triangle H.   (3, −1) (4, 2) (7, 0)

27 Write down the coordinates of one corner of shape
    G that have a negative x-value.   (−1, 1)

28 Write down the coordinates of one corner of shape
    G that have a negative y-value.   (1, −1)

29 Write down the coordinates of the mid-point of the
    shortest side of triangle A.   (−9, 4.5)

30 Write down the coordinates of one corner of shape
    I that have equal size x-value and y-value.   (−6, −6)

31 Which circle, F or L, has centre coordinates such that the
    sum of the x-value and the y-value is 0.   L

32 Which of the following, if any, is a reflection of shape
    B in the y-axis? Choose from: C, D, G, K, J or none.   none

33 Which of the following, if any, is a reflection of shape
    B in the x-axis? Choose from: C, D, G, K, J or none.   J

34 On the grid above, sketch in the reflection of shape
    M in the x-axis.

35 Which of the following, if any, is a translation of shape B?
    Choose from: C, D, G, K, J or none.   G

36 Write down the mapping that will translate shape K to position D. $(x + 3, y + 8)$

37 Write down the mapping that will translate the centre
    of circle F to the origin. $(x + 3, y − 1)$

38 Which shape has the larger area, K or M?   K

39 Which shape has exactly half the area of shape A?   I

40 Which of the following shapes have the same area as shape E?
    Choose from: B, D, F, H or M.   B and D