

Tally Ho Tutors

Practice for Secondary Selection

Mathematics

Paper A1

Time: 45 minutes

COMPLETE THE FOLLOWING INFORMATION BEFORE YOU BEGIN

- Date:
- Student Name:
- Student Date of Birth:

READ THESE INSTRUCTIONS CAREFULLY

- There are 60 questions in this paper and each question is worth one mark.
- Work through the questions in the order that they appear. There may be some questions that you cannot do. Leave these and go on to the next question: you may have time to return to them at the end for another attempt.
- Use the space by each question to work out your answer. The blank pages may be used for working if there is not enough space by the question.
- You may use a pen or pencil for this test.
- Calculators are not allowed.

FOR THE TUTOR

| Page | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Total |
|----------|----|---|---|---|---|---|---|-------|
| Possible | 17 | 6 | 7 | 5 | 8 | 9 | 8 | 60 |
| Scored | | | | | | | | |

Change the order of the figures in the following numbers to make the second largest number possible in each case.

- 1. 3856
.....
- 2. 1023
.....
- 3. 8558
.....
- 4. 3716
.....
- 5. 38672
.....
- 6. 44735
.....

7. $24\frac{1}{3} - 6\frac{2}{3} =$

8. $4\frac{2}{3} + 6\frac{2}{3} =$

9. $2\frac{3}{5} + 9\frac{4}{5} =$

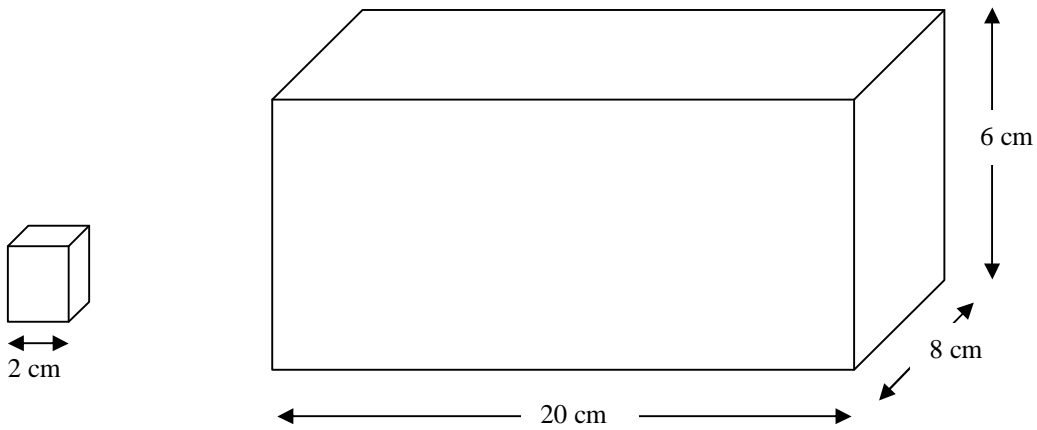
10. $7\frac{2}{5} - 3\frac{3}{5} =$

11. $8\frac{1}{4} - 3\frac{3}{4} =$

Place a tick in the box if the statement is correct and a cross if it is not correct.

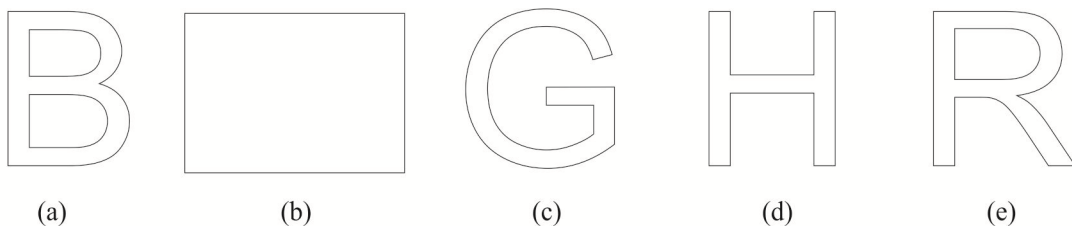
- 12. Half of ninety-eight is forty-nine.
- 13. Rayya went Maldives for 40 days from July 23rd to September 3rd.
- 14. A third of three fifths is three fifteenths.
- 15. Half of two thirds is two sixths.
- 16. A fifth of five sevenths is one seventh.
- 17. The diagonals of a rectangle bisect (divides equally) each other.

18. Figure below shows a large box measuring $20\text{ cm} \times 8\text{ cm} \times 6\text{ cm}$ and a small cube of sides 2 cm . How many of the small boxes can go exactly in side one large box.



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Some of the following shapes have line and / or rotational symmetry but some do not have any symmetry.



19. Which **shapes** are not symmetrical?

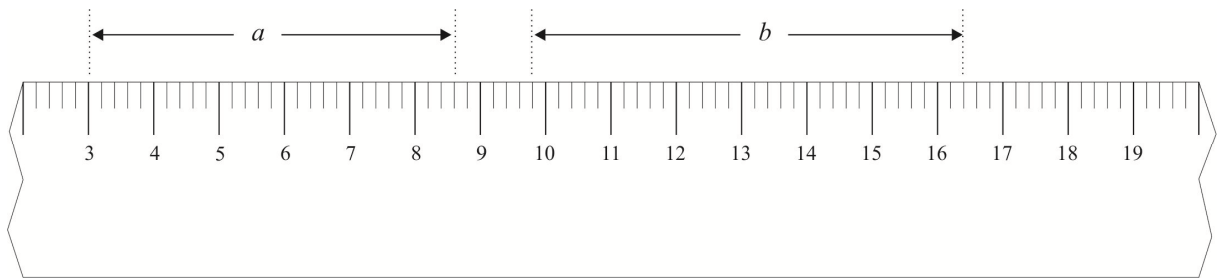
20. Which **shape** has rotational symmetry of order 1 and one line of symmetry?

21. Which **shapes** have two lines of symmetry and rotational symmetry of order 2?

22. Draw the line(s) of symmetry for shape (a).

23. Draw the line(s) of symmetry for shape (d).

Here is part of a metre ruler marked with centimetres.



24. What is the length a in cm?

25. What is the length a in mm?


26. What is the length b in cm?

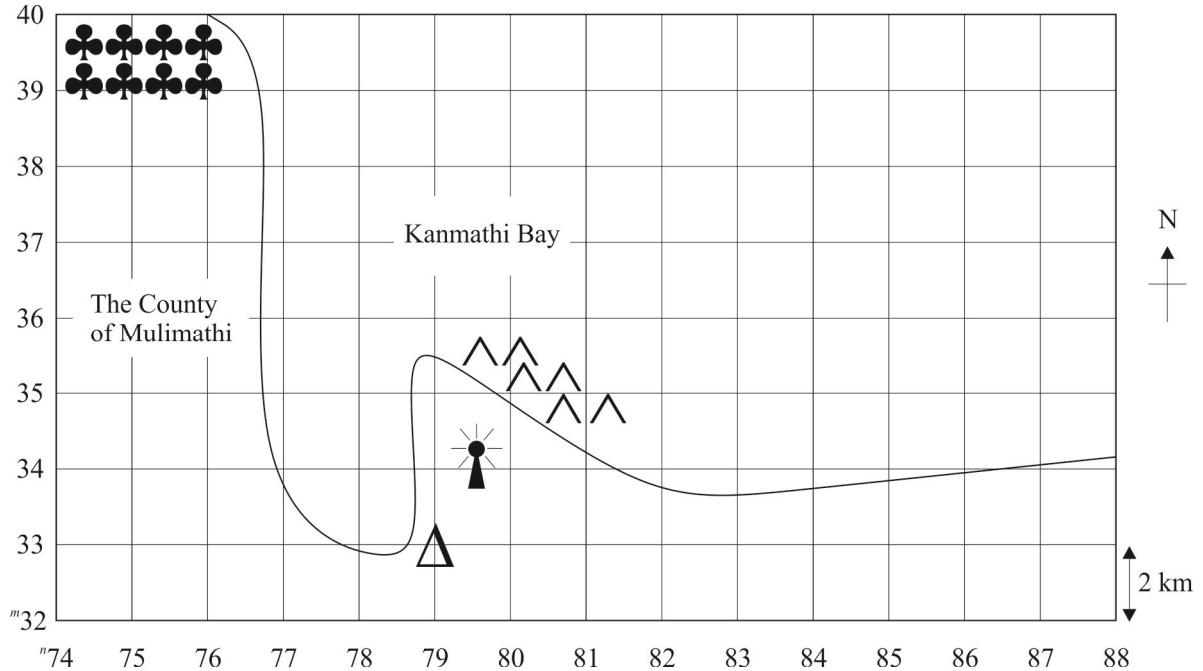
27. What is the length b in mm?

28. What is the length $a + b$ in cm?

29. What is the length $a + b$ in mm?

30. What is the length $a + b$ in m?

The map below shows part of the coastline of the County of Mulimathi. There is a hut at map reference ($^n79, ^m33$). There is a lighthouse in the neighbourhood. The scale is 1 cm to 2 km. The symbol for rocks is $\wedge\wedge$ and the symbol for trees is $\clubsuit\clubsuit$. The symbol for a boat is .



31. Draw a boat at map reference ($^n87, ^m39$). How long would it take the boat travelling at 20 km per hour to reach the port / beach near the trees?
32. Give the map reference (coordinates) of the lighthouse.
33. There is a ferry 10 km from the boat. Give the map reference (coordinates) of a possible position of ferry.
34. What is the approximate area of the County of Mulimathi (land area) shown on this map?
35. Approximately how long would it take to walk from the hut to a point near the trees at 3 km per hour?

Work out the pattern in the following series of numbers and put ring round the incorrect number in the series. The numbers in the series are not necessarily in order.

36. 84, 70, 56, 43, 28

37. 1, 5, 10, 15, 23, 31, 40, 50

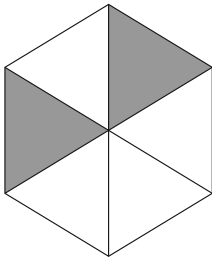
38. 12, 3, 6, 20, 9

39. 2, 8, 4, 32, 16, 101

40. 729, 243, 18, 27, 9, 3, 1

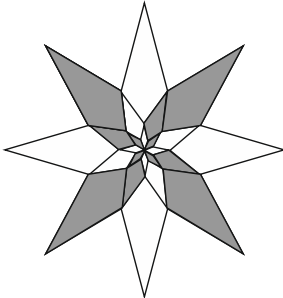
For each shape in the following questions, work out the fraction of the shape that is shaded.

41.



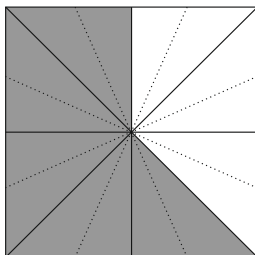
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42.



.....

43.



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44. Abba earns a sum of £2.75 each week by doing a small job. How many weeks will it take him to earn a total of £33.00?

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45. Tabrez usually starts school at 8.55 am and finishes at 3.25 pm and he has an hour of lunch break. How long is he in lessons each week?

.....

46. Farid's cat eats one and a half tins of cat food every day. Each tin costs £2.60. How much does Farid spend each week on cat food?

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Write each of these in the correct set in the following diagram.

47. 45

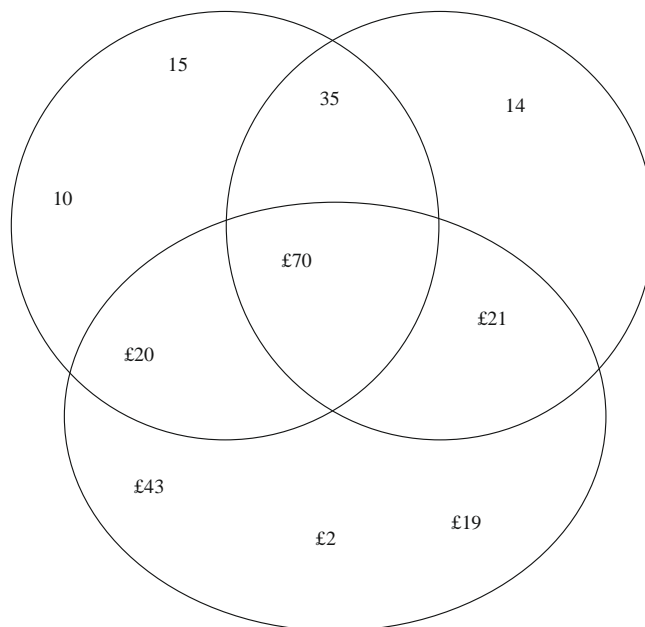
48. £42

49. £140

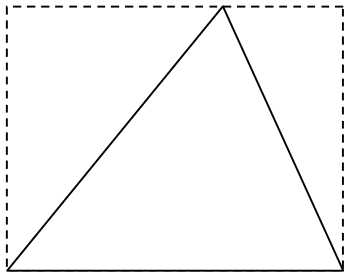
50. 7

51. £7

52. £84



53. The area of the rectangle is 246 cm^2 . What is the area of the triangle?



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Place a tick in the box if the statement is correct and a cross if it is not correct.

54. $\frac{x}{y}$ is the same as $\frac{x^2}{y^2}$.

55. $\frac{x}{y}$ is the same as $\frac{x^2}{xy}$.

56. $\frac{x}{y}$ is the same as $\frac{x+m}{y+m}$.

57. $\frac{x}{y}$ is the same as $\frac{x(a+b)}{y(a-b)}$.

58. $\frac{1}{2}$ is more than $\frac{1}{3}$.

59. $\frac{5}{3}$ is less than $\frac{3}{2}$.

60. If $\frac{1}{2} = \frac{x}{y}$, then $y = 2x$.