SOLIHULL JUNIOR SCHOOL

9+ ENTRANCE EXAMINATION

MATHEMATICS

SAMPLE PAPER 1

SOLIHULL

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MATHEMATICS

Time: 50 Minutes

Attempt as many questions as you can. Write your answers on this paper in the spaces provided. Read the questions carefully and show your working where necessary. Use any method you like when working out each question.

1. Write in figures the number nine thousand, five hundred and eight.

   _____

2. What is the value of the digit 8 in 59834? _____

3. What needs to be added to 3956 to make 6167? _____

4. What needs to be subtracted from 5798 to make 3869? _____

5. a.
$$\begin{array}{r} 2.9 \\ +3.2 \\ \hline \end{array}$$

   b.
$$\begin{array}{r} 5.49 \\ +2.65 \\ \hline \end{array}$$

   c.
$$\begin{array}{r} 2.3 \\ -1.5 \\ \hline \end{array}$$

   d.
$$\begin{array}{r} 4.36 \\ -1.57 \\ \hline \end{array}$$

6. Use each of these digits once.

7	9	1	5

What is

a. the largest number that can be written? _____

b. the smallest number that can be written? _____

7. Write the following numbers to the nearest 10

a) 37 → ☐

b) 43 → ☐

c) 253 → ☐

d) 2184 → ☐

8. a. Divide 400 by 4 and 24 by 4.
Write down both results.

_____ _____

b. Use your results in part a. Calculate:

424 ÷ 4

_____

9. Fill in the missing digits to make these equivalent fractions.

a. $\frac{\square}{6} = \frac{1}{3}$ b. $\frac{\square}{8} = \frac{1}{4}$

c. $\frac{\square}{12} = \frac{2}{3}$ d. $\frac{\square}{16} = \frac{3}{4}$

10. Work out the following:

a. $\frac{1}{3}$ of 18 = _____

b. $\frac{2}{3}$ of 24 = _____

c. $\frac{1}{5}$ of 30 = _____

d. $\frac{5}{8}$ of 40 = _____

e. $\frac{1}{4}$ of 32 = _____

f. $\frac{3}{4}$ of 48 = _____

11. Katrina mixes 0.7 kg of flour with 0.38 kg of butter.

    a. What is the total mass of the mixture? _____

    b. How much more flour does she use than butter? _____

12. Calculate the following additions and subtractions using any method you like:

    a. 297 + 104 = _____

    b. 3794 + 1975 = _____

    c. 294 – 33 = _____

    d. 2041 – 1999 = _____

13. Calculate the following multiplications and divisions using any method you like:

    a. 23 x 7 = _____

b. 42 x 16 = _____

c. 96 ÷ 8 = _____

d. Sapal multiplies 18.3 by 7.99.

Roughly, which of these results should he get?

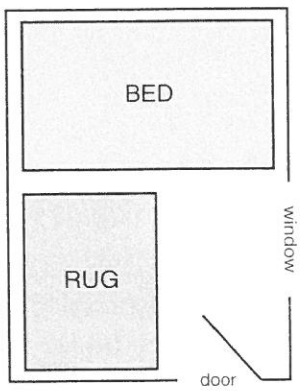
16 60 160 _____

Rupinder divides 16.68 by 4.1.

Roughly, which of these results should she get?

0.4 4 40 _____

14. This is Claire's bedroom:



a. Roughly, what percentage of the floor is covered by the bed?

Choose from these:

20% 40% 60% _____

b. Roughly, what fraction of the floor is covered by the rug?

Choose from these:

$\frac{1}{4}$ $\frac{1}{3}$ $\frac{1}{2}$ _____

15. This rule gives the approximate number of inches for a distance in cm:

> *Double the number of cm.*
> *Divide by 5*

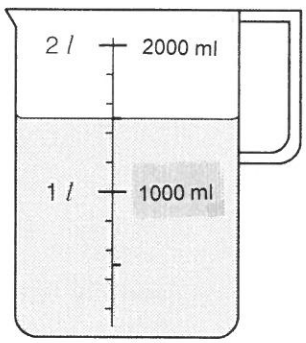
Roughly, how many inches is

a. 5 cm _____

b. 20 cm _____

16. a. The jug contains 1½ litres of water.

Use the scale. How many ml is this?

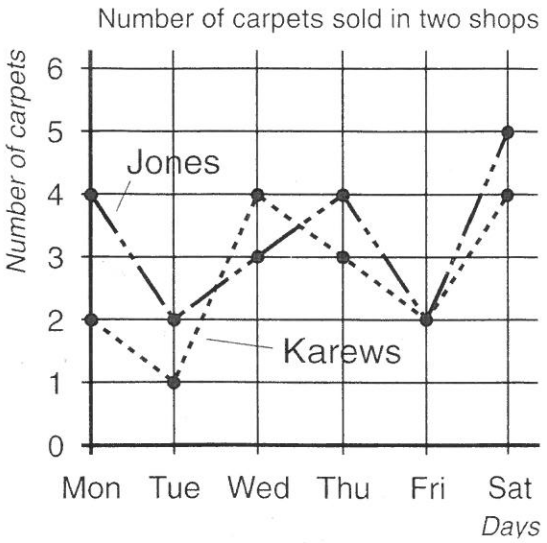


_____

b. A flask contains 1¼ litres of water. How many ml is this?

_____

17. The graph shows how many carpets two shops sold last week.



On which day did

a. Karews sell more than Jones?

_____

b. the shops sell the same number of carpets?

_____

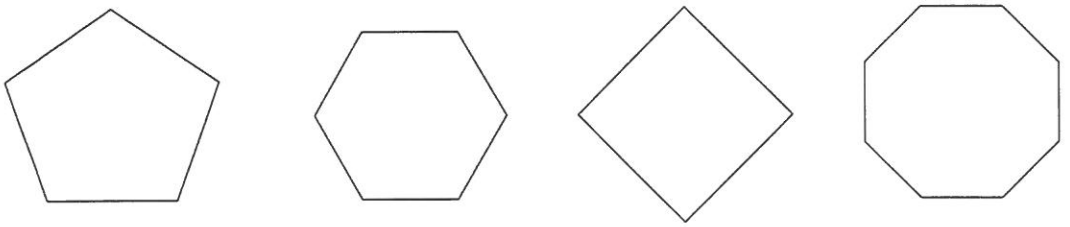
c. How many carpets did Jones sell during the whole week?

_____

d. How many more carpets did Jones sell than Karews over the whole week?

_____

18. Name the shapes and draw their lines of symmetry.



_____ _____ _____ _____

19. Write down the next number in each pattern.

a. 4 10 16 22 _____

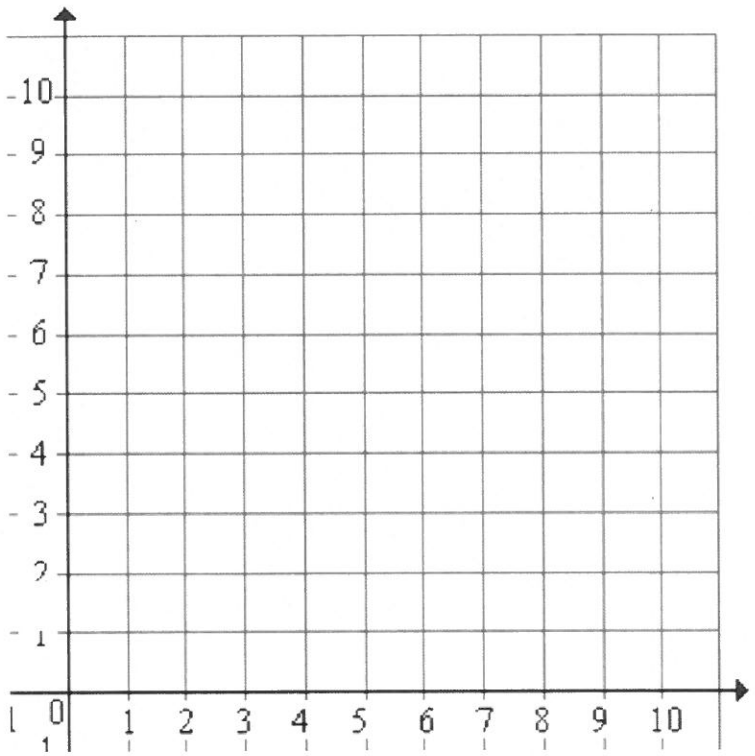
b. 3 6 12 24 _____

20. Write as a decimal.

a. 4 tenths + 8 hundredths _____

b. 7 tenths + 13 hundredths _____

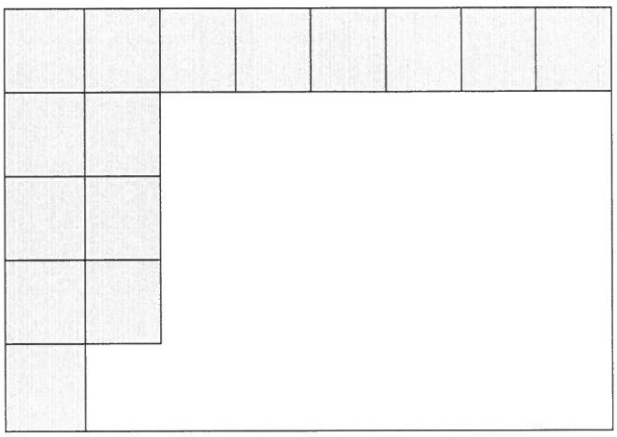
21. Use the grid to answer the questions.



a) On the grid, plot the points (4,5)
(8,1)
(8,9)
(10.5)

b) Join all four points to create a shape, then draw its ***line of symmetry.***

22. Lisa is covering this rectangle with 1 cm square tiles.



a. What is the area of the rectangle? _____

b. What is the perimeter of the rectangle? _____

23. Complete the times table grid

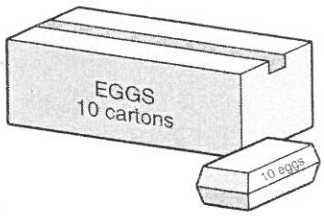
X	6	5	9	4	7
8					
3					
12					
7					
9					

24. a. Copy and complete this list of factors of 24:

1, 2, ____, ____, ____, ____, ____, 24

b. List all the factors of 27. _____

25. There are 10 eggs in a carton. There are 10 cartons in a box.



How many eggs are there in

a. 1 box _____

b. 40 boxes and 5 cartons? _____

26. Read what Ailish and Pete are saying:

Ailish:	*Pete:*
My number is less than 30. It is a multiple of 5. When I add 2 to it, I get a Multiple of 11.	*My number is less than 20. It is a multiple of 9 but not of 6.*

a. What is Ailish's number? _____

b. What is Pete's number? _____

27. Write a number in each circle so that the number in each square equals the sum of the two numbers in the circles either side of it.

