

King David High School



ENTRANCE EXAMINATION
January 2019

Mathematics Paper 1
50 minutes

Full Name _____

Present School _____

1 Write the number 27 059 in words.

2 $536 - 11$

3 $20 + 519$

4 3×126

5 $5\,272 \div 4$

6 $129.35 - 0.47$

7 $459 + 3\,762$

8 40×700

9 $3\,280 \div 1000$

10 3×27.6

11 53×627

12 $42\,768 \div 120$

13 2.7×3.9

14 Find the sum of £4.22, £31.49 and 76 pence.

15 Find the product of 10, 20, 30 and 40.

16 Divide 100 by 40, leaving your answer as a decimal.

17 $3\,588 \div 13$

18 $\frac{5}{9} \times 243$

19 $\frac{1}{3} + \frac{5}{9} - \frac{2}{5}$

20 $9 + 3\frac{7}{10} + 8\frac{3}{5}$

21 $52 \div \frac{2}{3}$

22 Write the following numbers in ascending order:

5, -5.5, 0.555, -55, 0.712 2

23 Find 15% of £420.

24 Write down a number half way between 18 and 52.

$$25 \quad 2 + 12 \times (8 - 3) \div 4$$

$$26 \quad 43 - 5.2 + 1.03$$

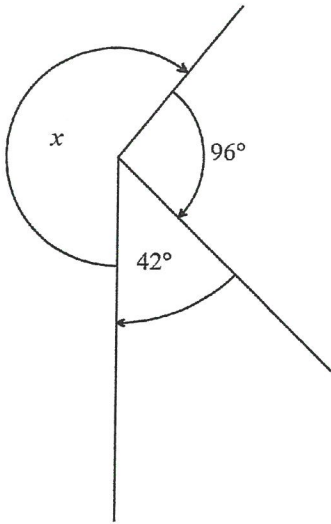
$$27 \quad 257.36 \div 0.4$$

28 Write 0.15 as a fraction in its simplest form.

29 Adam starts by facing North. He turns through $\frac{3}{4}$ of a revolution clockwise. In which direction is Adam now facing?

Magda starts by facing West. She turns $\frac{3}{8}$ of a revolution anticlockwise. In which direction is Magda now facing?

30 The following diagram is not to scale.



a. Work out the size of angle x .

b. Insert each of the words *reflex*, *acute* and *obtuse* in the correct space below.

The 96 degree angle is _____

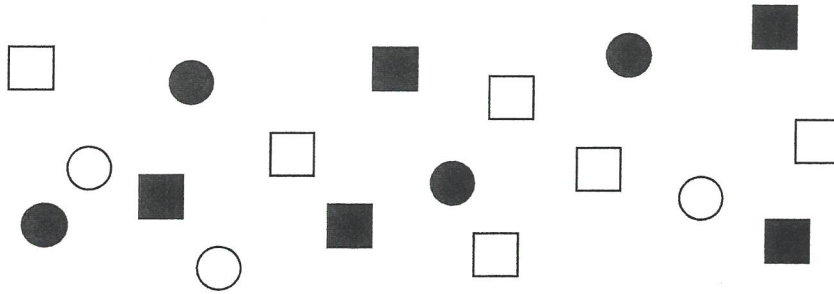
The 42 degree angle is _____

Angle x is _____

31 Calculate the obtuse angle between the hour hand and the minute hand of a watch, when it is five o'clock.

32 Emma has a part-time job that pays £7.50 per hour. She gets a promotion and her pay is to be increased by 12%. What will her new hourly pay be?

33 Here are some shapes.

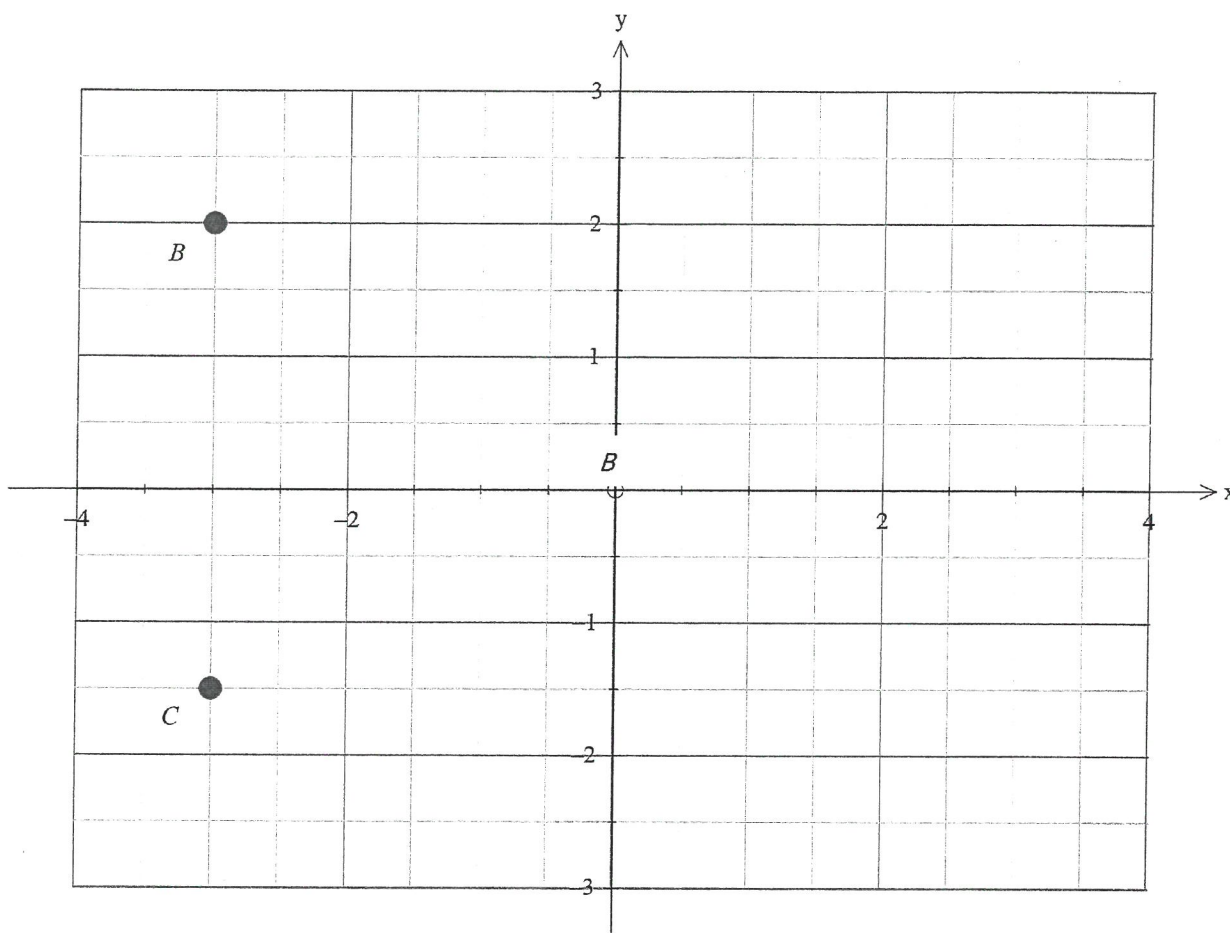


a. Complete the table to show the number of shapes in each category.

	White	Black
Circle		
Square		

One of the shapes in the diagram is chosen at random.

- b. What is the probability that the shape will be a square?
- c. What is the probability that it will be a black circle?
- d. What is the probability that it will be a black triangle?



- On the grid, plot the point $(3, 2)$. Label the point A.
- Write down the co-ordinates of the point B.
- Write down the co-ordinates of the point C.
- A, B, C are three vertices of a rectangle. Plot the fourth vertex and label it D.
- Draw in any lines of symmetry on your rectangle.

- 35 Karen catches the 11:35 Newcastle train from Manchester Piccadilly. Her journey should take 2 hours and 32 minutes but the train is delayed by 50 minutes. What time does she arrive in Newcastle? Give your answer using the 24-hour clock.

- 36 The table shows the midnight temperature in six towns on one night in December.

Town	Tenby	Inverness	Keele	Leicester	Carlisle	Brighton
Temperature (°C)	2	-4	3.5	1	-1	5

- Which town had the lowest temperature?
- List the temperatures in order of size, starting with the highest.
- Work out the difference in temperature between Inverness and Brighton.
- Work out the median midnight temperature for these six towns.

37 Jordan carries out a survey of the number of pets owned by pupils in his class. Here are his results:

Number of Pets	Number of Pupils
0	5
1	7
2	4
3	3
4	1

- How many pupils are there in his class?
- What is the mode?
- What percentage of pupils had more than one pet?

38 Find the missing digits that make this subtraction correct:

$$\begin{array}{r} 4 \quad \square \quad 7 \\ \quad 4 \quad 9 \quad - \\ \hline \square \quad 7 \quad 8 \end{array}$$

