

KEY STAGE 3 MATHEMATICS YEAR 8

Revision Topic List – June 2025

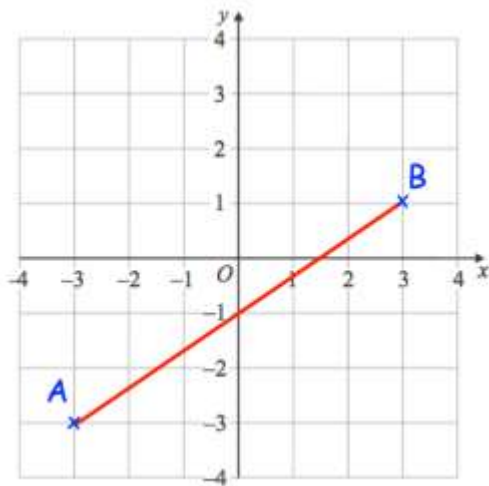
All groups need to know	Had a try	Nearly there	Got it!
Rounding			
Factors, multiples, primes			
Simplify expressions			
Fractions			
Percentages			
Estimation			
Area of polygons			
Product of prime factors			
Venn diagrams			
Equations of lines parallel to the axes			
Expand brackets			
Factorise expressions			
Outcomes			
Two-way tables			
Standard form			
Linear graphs			
Frequency tables			
Angle facts			
Scatter graphs			
Sequences			
Midpoint of line segment			
Solve equations			
8MFR, 8MFA, 8MFN, 8MXR, 8MXA & 8MXN also need to know for the extension paper			
Gradient of line			
Sequences – nth term			
Expand double brackets			
Reverse percentage			
Form & solve inequality			

The questions below are for pupils doing the extension paper.

30 - 35

Year 8 - revision questions

1. List 5 multiples of 6
2. List all the factors of 36
3. Write down all the prime numbers between 10 and 20
4. Write down the coordinates of the midpoint of line AB



5. Round 2715.8 to
 - a. nearest integer
 - b. nearest 10
 - c. nearest 100
 - d. nearest 1000
6. Calculate **30%** of **360**.

7. Draw **one** line to join **two fractions** which have the **same value**.

$$\frac{3}{5}$$

$$\frac{6}{9}$$

$$\frac{1}{8}$$

$$\frac{7}{10}$$

$$\frac{2}{3}$$

$$\frac{3}{7}$$

8. Simplify the following expressions:

a. $8y - 12y + 7y$

b. $6x^2 + x^2 - 5x^2$

c. $9x^2 + 13x - 15x^2 + 4x$

9. The number of coins in a purse are shown below

10p	20p	50p	£1
4	9	4	3

What percentage of the coins are:

a. 50p

b. 20p

10. Round the following to one decimal place.

2.24

5.38

7.45

4.61

3.96

11. Complete the table to show equivalence:

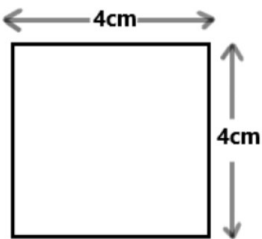
Fraction	Decimal	Percentage
	0.8	
		75%
$\frac{6}{10}$		
$\frac{2}{5}$		
	0.3	

12. A library has 385 shelves with 42 books on each shelf.

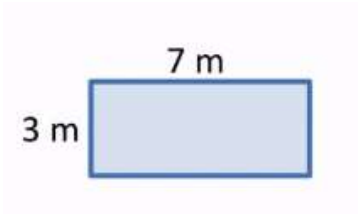
Estimate how many books are in the library.

13. Find the area of these polygons, include units in your answers.

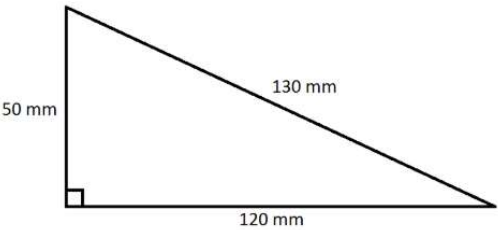
a.



b.



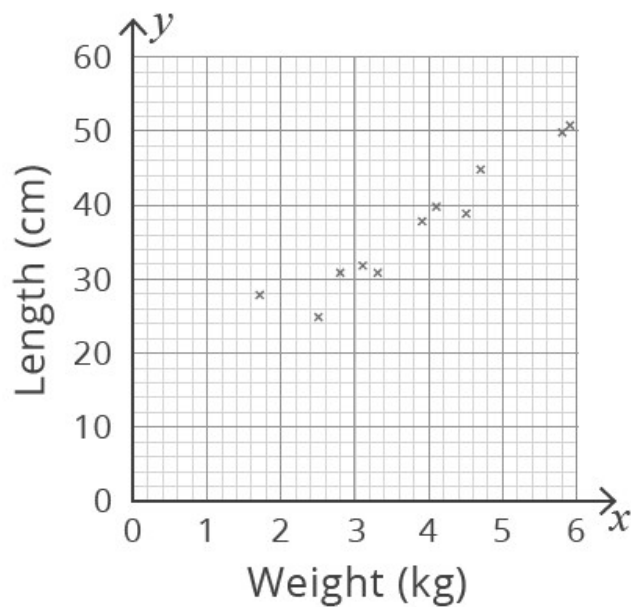
c.



14. Write 300 as a product of prime factors.

15. The mass and length of some fish are shown in the scatter graph below.

a. Isaac catches a fish that weighs 5.2kg and is 48cm long. Add this fish to the graph.



b. Describe the type of correlation shown in the scatter graph.

c. By drawing a line of best fit, estimate the length of a fish that weighs 3.5kg.

16. Calculate 15% of 460

17. Increase £30 by 20%

18. Increase 2570 by 23%

19. Fill in the missing numbers in these sequences:

a. 3, ____, ____, 27

b. 1, ____, ____, 19

c. 18, ____, ____, 39

20. a) Expand and simplify $7f(2f - 3) + 8f$

b) Expand $(x + 7)(x - 4)$

c) Factorise $18a - 27$

d) Fully factorise $21h^2 + 7h$

21.

Iqbal eats in a cafe.

He can choose **one** main course and **one** piece of fruit.

One possible combination is (Fish, Pear).

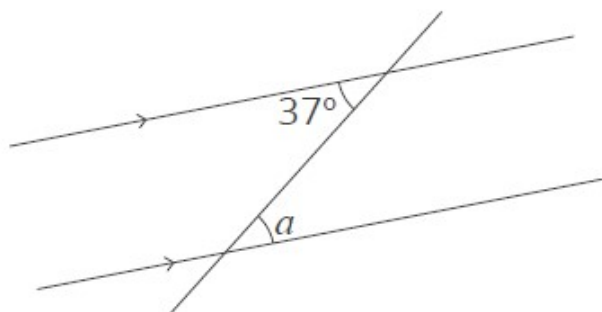
Write down all the possible combinations that Iqbal can choose.
The first one has been done for you.

(F , P).....

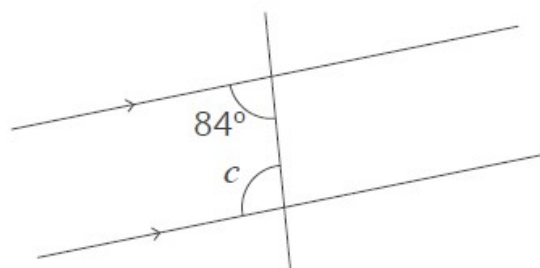
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Main Course	Fruit
Fish	Apple
Lamb	Banana
Salad	Pear

22. Find the size of the missing angles. Give a reason for each angle.



Angle fact _____



Angle fact _____

23. a. Express 0.000043 in standard form

b. Express 7×10^4 as an ordinary number

c. Work out $3.25 \times 10^5 \times 2.4 \times 10^{-1}$
Give your answer in standard form

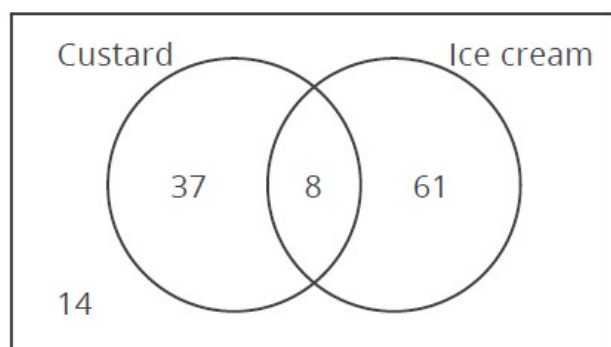
24. Josh asked 30 students how many minutes they each took to get to school.
The table shows some information about his results.

Time taken (t minutes)	Frequency
$0 < t \leq 10$	6
$10 < t \leq 20$	11
$20 < t \leq 30$	8
$30 < t \leq 40$	5

a. How many students took 20 minutes or less?

b. Josh says 6 students took exactly 10 minutes to get to school. Explain why Josh might be wrong.

25. The Venn diagram below shows the number of guests at a wedding and their dessert orders.

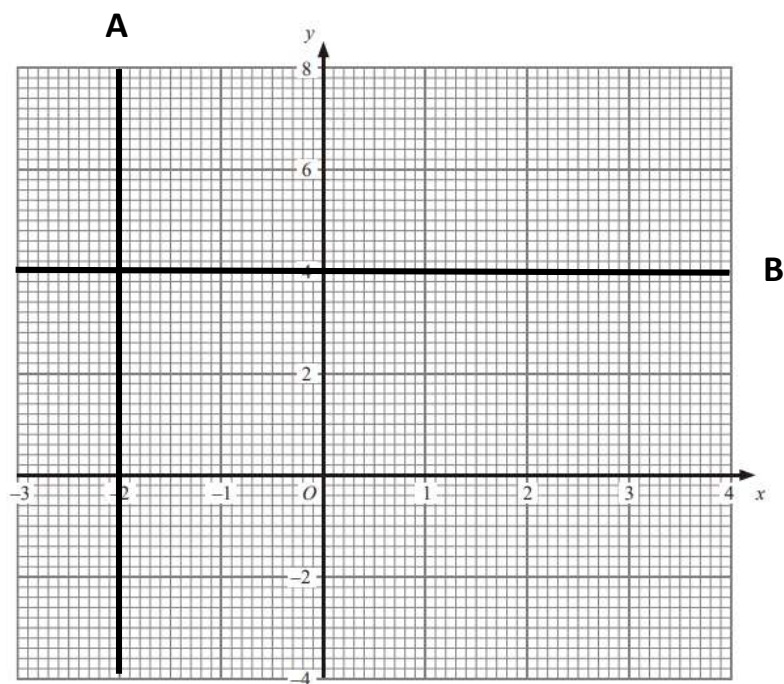


a. How many people ordered ice-cream?

b. How many people did not order custard?

c. What fraction of people ordered both custard and ice-cream?

26. Write down the equations of lines **A** and **B**.



a. Line **A**

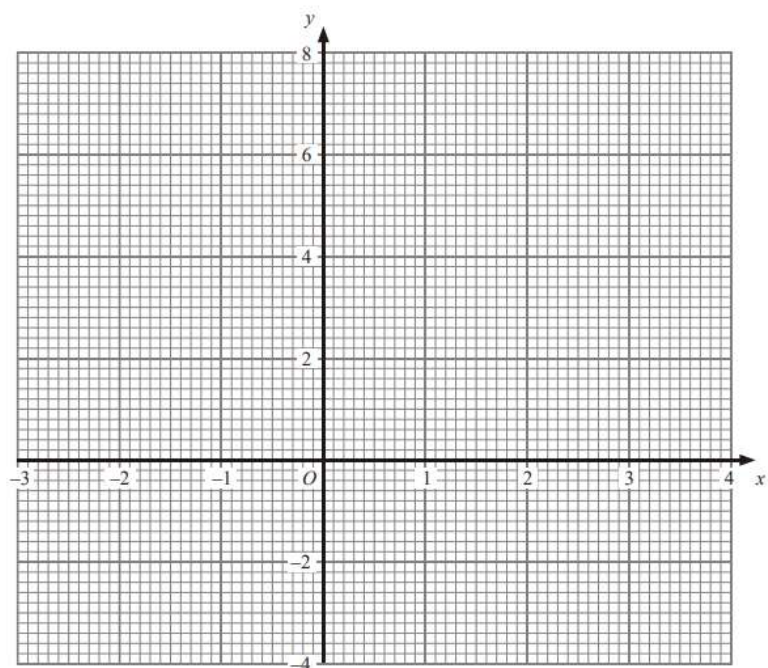
b. Line **B**

c. Draw the line $x = 2$ on the graph and label it **C**

27. a. Complete this table of values for $y = 2x - 1$

x	-1	0	1	2	3	4
y			1	3	5	

b. On the grid, draw the graph of $y = 2x - 1$



28.

A football team played 38 games.
19 games were played at home and the rest were played away.

The team won a total of 21 games.
They drew 4 games away.
2 of the 10 games they lost were at home.

Complete the two way table.

	Won	Drawn	Lost	Total
Home				
Away				
Total				

From the table, work out the probability that a game chosen at random is an away win.

29. Solve $2x + 21 = 4x + 5$

Extension paper only questions

30. Solve $4x^3 = 32$

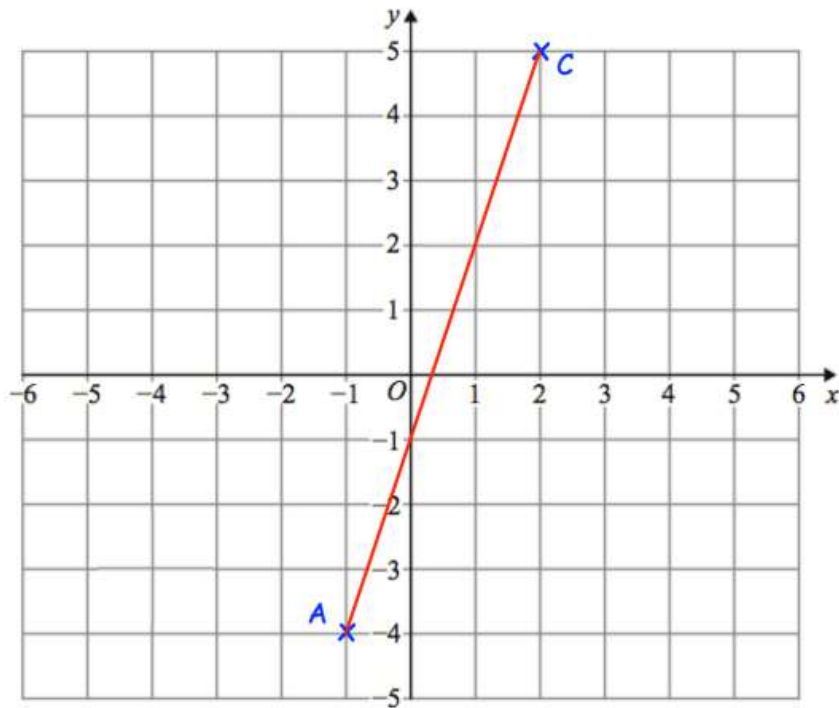
31. Here are the first 5 terms of an arithmetic sequence.

6, 11, 16, 21, 26

Find an expression for the n th term of the sequence.

32. Expand & simplify
 $(x - 6)(x - 2)$

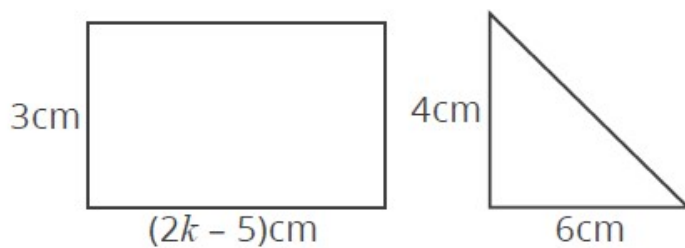
33. Find the equation of the line AC



34. Jonah buys a watch costing £84. This includes VAT of 20%.

Calculate the cost of the watch without VAT.

35. The area of the rectangle is greater than area of the triangle.



a. Write an expression for the area of the rectangle.

b. Hence, find the set of possible values of k .