

# Catch-Up 2020 Revision pack

## Pearson Edexcel GCSE (9–1) **Mathematics** Foundation tier

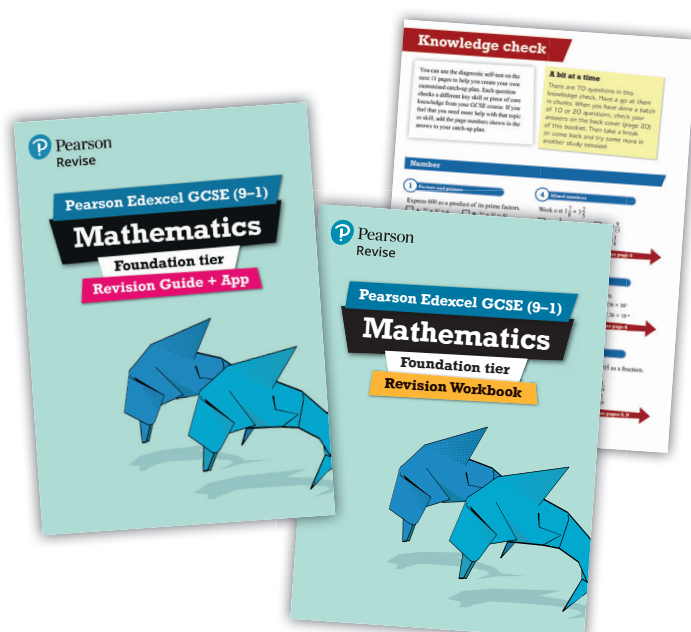
**Includes**

**Knowledge check  
diagnostic self-test**

**Revision Guide + App**

**and**

**Revision Workbook**



# Get back on track

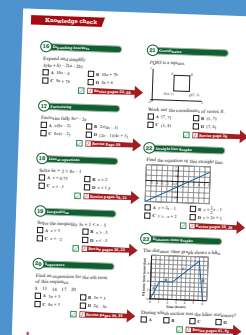
The COVID-19 pandemic has been disruptive for students of all ages around the world. And if you're preparing for your GCSEs then it's especially important that you catch up on any work you've missed. This pack is designed to help you revise and practise any topics you might need a reminder on, and stay on track for success in your Pearson Edexcel Mathematics GCSE course.

## Time for a check-up

Take the **Knowledge check** diagnostic self-test to help you identify which topics and skills you need to recap. The questions in this test focus on key skills and core knowledge that you will need to know to succeed in the rest of your GCSE course, and in your exams.

You can mark your own work using the **answers** on the back cover (page 20) of this booklet. If you struggle with any of the questions, just add the Revision Guide page numbers for that question to your custom catch-up plan on page 15. Then you can revise and practise that topic and build your confidence.

## Pages 4–14



## Make a plan

Create your own custom **Catch-up plan** by entering the page numbers you need to revise in the table on page 15. You can use the tick boxes to track your progress, and there is space on pages 16 and 17 to add any extra notes from your teacher or tutor.

## Pages 15–17

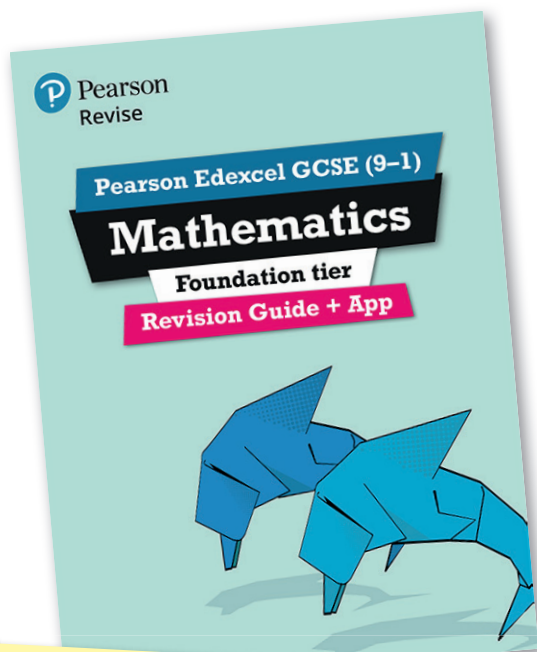
Page	Had a go	Nearly there	Nailed it!
4...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5...	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6...	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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8...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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14...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Stress-free studying

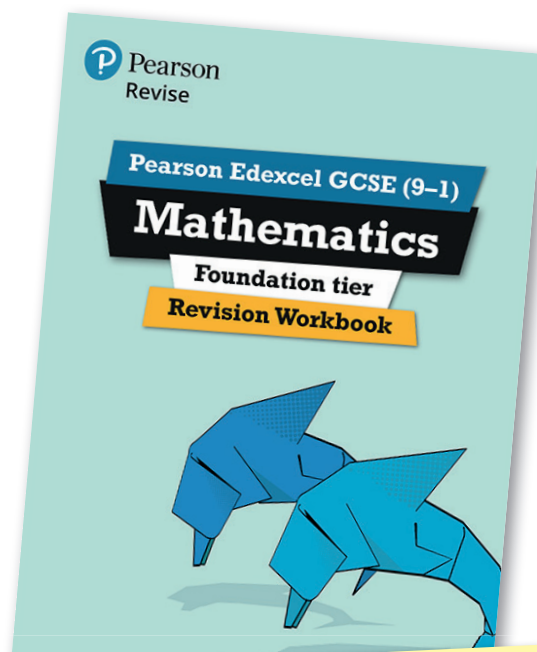
Here are a few top tips from our experts to stay healthy and sane when things get busy!

- Set yourself simple targets, like reviewing a couple of pages of the Revision Guide in a 20-minute study session.
- Phone a friend! If you're struggling with a topic, ask one of your friends if they've figured it out and can explain it to you.
- Find a quiet space at home or at school – use headphones if it helps you to concentrate.
- Put your phone on silent, and try not to get distracted by TV or the internet.
- Drink plenty of water, get plenty of sleep, take breaks and stay active!

Once you have identified your target topics and created your catch-up plan, it's time to break open the books and get revising. The Revision Guide and Revision Workbook in your pack have matching page numbers to help you find your way around quickly and easily.



Your **Revision Guide** is packed with essential facts, key skills and worked examples to help you stay ahead of the game. Each page covers a single topic so you can stay organised, and the book covers your **whole course**, so once you're back up to speed you will be able to use it alongside your school work, and to revise for your exams.



Check that you have nailed each topic by practising some exam-style questions on the corresponding page in the **Revision Workbook**. There are **guided questions** which give you part of the working, and hints and tips to help you get started. And when the exams are a bit closer, you can use the **exam-style practice papers** to check that you are exam-ready.

## Find your catch-up topics

If you know which units or topics you want to revise, you can use the **Matching chart** to find the corresponding Revision Guide and Workbook pages. Your teacher or tutor might be able to tell you which units or topics you missed, or you might recognise them from the work you did at home during lockdown.

Tick the units or topics you want to revise, then add those page numbers to your catch-up plan on page 15.

## Pages 18–19

**Matching chart**

You can use this chart to help you choose pages for your catch-up plan. Tick the units and topics you want to revise in the 'Units and topics' column. The corresponding page numbers will be shown in the 'Revision Guide' and 'Revision Workbook' columns.

Unit/Topic	Revision Guide page	Revision Workbook page
<b>Unit 1: Numbers</b>		
Arithmetic and algebra	18	18
Geometry and angles	19	19
Statistics and probability	20	20
<b>Unit 2: Fractions</b>		
Arithmetic and algebra	21	21
Geometry and angles	22	22
Statistics and probability	23	23
<b>Unit 3: Ratios, rates and percentages</b>		
Arithmetic and algebra	24	24
Geometry and angles	25	25
Statistics and probability	26	26
<b>Unit 4: Algebra, geometry and trigonometry</b>		
Arithmetic and algebra	27	27
Geometry and angles	28	28
Statistics and probability	29	29
<b>Unit 5: Functions and graphs</b>		
Arithmetic and algebra	30	30
Geometry and angles	31	31
Statistics and probability	32	32
<b>Unit 6: Probability and statistics</b>		
Arithmetic and algebra	33	33
Geometry and angles	34	34
Statistics and probability	35	35

# Knowledge check

You can use the diagnostic self-test on the next 11 pages to help you create your own customised catch-up plan. Each question checks a different key skill or piece of core knowledge from your GCSE course. If you feel that you need more help with that topic or skill, add the page numbers shown in the arrows to your catch-up plan.

## A bit at a time

There are 70 questions in this knowledge check. Have a go at them in chunks. When you have done a batch of 10 or 20 questions, check your answers on the back cover (page 20) of this booklet. Then take a break or come back and try some more in another study session!

## Number

### 1 Place value

Write the number twelve thousand and thirty-one in figures.

☐ A 1231

☐ B 12031

☐ C 120031

☐ D 1200031



☒ Revise page 1

### 4 Calculations with whole numbers

Work out  $45 \times 17$

Do not use a calculator.

☐ A 918

☐ B 680

☐ C 360

☐ D 765



☒ Revise pages 4, 5

### 2 Negative numbers

Work out  $-4 + 6 \times 2$ .

Do not use a calculator.

☐ A 8

☐ B 4

☐ C -16

☐ D -20



☒ Revise pages 2, 16

### 5 Calculations with decimals

Work out  $0.49 + 1.3$

Do not use a calculator.

☐ A 6.2

☐ B 1.79

☐ C 1.52

☐ D 1.349



☒ Revise pages 6, 7

### 3 Rounding

Round 8.6592 to 1 significant figure.

☐ A 10

☐ B 8.7

☐ C 8.6

☐ D 9



☒ Revise pages 3, 10

### 6 Squares and cubes

Work out  $3 + 12^2$ .

Do not use a calculator.

☐ A 147

☐ B 169

☐ C 7

☐ D 49



☒ Revise pages 8, 16

## 7 Indices

Write  $\frac{7^{10} \times 7^3}{7}$  as a single power of 7.

- ☐ A  $7^{29}$  ☐ B  $7^{12}$   
☐ C  $7^{23}$  ☐ D  $7^{-13}$

☒ ☒ **Revise page 9**

## 8 Factors and primes

Express 600 as a product of its prime factors.

- ☐ A  $2^2 \times 5^2 \times 6$  ☐ B  $2^3 \times 3^2 \times 5^3$   
☐ C  $2^3 \times 3 \times 5^2$  ☐ D  $2 \times 3 \times 10^2$

☒ ☒ **Revise pages 11, 12**

## 9 Fractions

Work out  $\frac{4}{5}$  of £60. Do not use a calculator.

- ☐ A £75 ☐ B £12  
☐ C £48 ☐ D £45

☒ ☒ **Revise pages 13, 14**

## 10 Rounding

Work out  $1\frac{7}{8} \times 3\frac{2}{5}$

- ☐ A  $6\frac{3}{8}$  ☐ B  $4\frac{9}{13}$   
☐ C  $3\frac{7}{20}$  ☐ D  $5\frac{1}{8}$

☒ ☒ **Revise page 15**

## 11 Standard form

Write 736 000 in standard form.

- ☐ A  $7.36 \times 10^3$  ☐ B  $736 \times 10^3$   
☐ C  $7.36 \times 10^5$  ☐ D  $7.36 \times 10^{-6}$

☒ ☒ **Revise pages 17, 18**

# Algebra

## 12 Collecting like terms

Simplify  $3x - 2y + 5x - y$

- ☐ A  $8x - 3y$  ☐ B  $8x - 2$   
☐ C  $x + 4y$  ☐ D  $2x + 3y$

☒ ☒ **Revise page 22**

## 14 Algebraic indices

Simplify  $(x^2y)^3$

- ☐ A  $x^2y^3$  ☐ B  $x^5y^3$   
☐ C  $xy^6$  ☐ D  $x^6y^3$

☒ ☒ **Revise page 24**

## 13 Simplifying terms

Simplify  $3n \times 2n \times z$

- ☐ A  $5nz$  ☐ B  $6nz$   
☐ C  $5n^2z$  ☐ D  $6n^2z$

☒ ☒ **Revise page 23**

## 15 Formulae

$P = 5Q^2 - 2QR$

Find the value of  $P$  when  $Q = 4$  and  $R = -3$

- ☐ A 76 ☐ B 104  
☐ C 112 ☐ D 56

☒ ☒ **Revise pages 26, 27**

## Knowledge check

### 16 Expanding brackets

Expand and simplify

$$3(4a + b) - 2(a - 2b)$$

☐ A  $10a - b$

☐ B  $10a + 7b$

☐ C  $9a + 7b$

☐ D  $5a + b$



✗ Revise pages 22, 28

### 17 Factorising

Factorise fully  $8x^2 - 2x$

☐ A  $x(8x - 2)$

☐ B  $2x(4x - 1)$

☐ C  $8x(x - 2)$

☐ D  $(2x - 1)(4x + 1)$



✗ Revise page 29

### 18 Linear equations

Solve  $6x + 2 = 8x - 1$

☐ A  $x = 0.75$

☐ B  $x = 2$

☐ C  $x = -1$

☐ D  $x = 1.5$



✗ Revise pages 30, 31

### 19 Inequalities

Solve the inequality  $3x + 1 < x - 5$

☐ A  $x > 3$

☐ B  $x > -3$

☐ C  $x < -2$

☐ D  $x < -3$



✗ Revise pages 32, 33

### 20 Sequences

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

8 11 14 17 20

☐ A  $3n + 5$

☐ B  $5n + 3$

☐ C  $8n + 3$

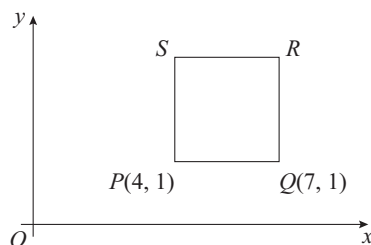
☐ D  $20 - 3n$



✗ Revise pages 34, 35

### 21 Coordinates

$PQRS$  is a square.



Work out the coordinates of vertex  $R$ .

☐ A  $(7, 7)$

☐ B  $(1, 7)$

☐ C  $(1, 4)$

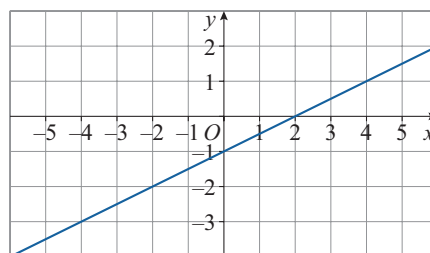
☐ D  $(7, 4)$



✗ Revise page 36

### 22 Straight line graphs

Find the equation of this straight line.



☐ A  $y = 2x - 1$

☐ B  $y = \frac{1}{2}x - 1$

☐ C  $y = -x + 2$

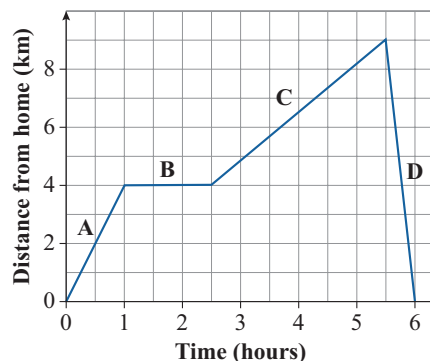
☐ D  $y = 2x + 1$



✗ Revise pages 38, 39

### 23 Distance-time graphs

The distance-time graph shows a hike.



During which section was the hiker stationary?

☐ A

☐ B

☐ C

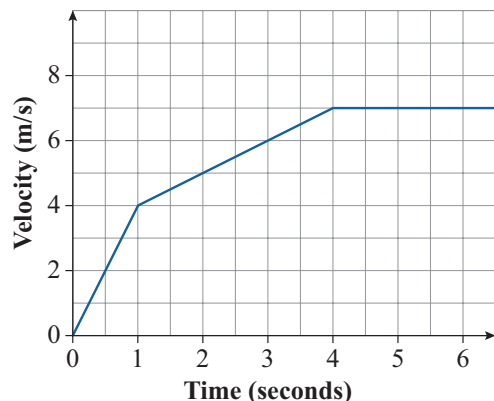
☐ D



✗ Revise pages 41, 42

## 24 Velocity-time graphs

The velocity-time graph shows the velocity of a runner.



Which **one** of the following statements is **not** true?

- ☐ A The runner was moving fastest for the first second of the race
- ☐ B The runner was accelerating for the first second of the race
- ☐ C The runner was travelling at a constant speed between 4 and 6 seconds
- ☐ D The runner reached a speed of 7 m/s after 4 seconds

☒ ☐ X **Revise page 42**

## 25 Double brackets

Expand and simplify  $(2x + 3)^2$

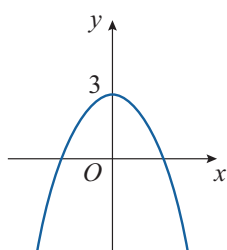
- ☐ A  $4x^2 + 9$       ☐ B  $2x^2 + 6x + 9$
- ☐ C  $4x^2 + 12x + 9$       ☐ D  $4x^2 + 6x + 9$

☒ ☐ X **Revise page 43**

## 26 Quadratic graphs

Match this graph to the correct equation.

- ☐ A  $y = 3 - x^2$
- ☐ B  $y = x^2 - 3$
- ☐ C  $y = x^2 + 3$
- ☐ D  $y = x^3$



☒ ☐ X **Revise pages 44, 45, 48**

## 27 Factorising quadratics

Factorise  $x^2 - 4x - 12$

- ☐ A  $4x(x - 3)$       ☐ B  $(x - 4)(x + 3)$
- ☐ C  $(x - 6)(x + 2)$       ☐ D  $(x - 4)^2$

☒ ☐ X **Revise page 46**

## 28 Quadratic equations

Solve the equation  $x^2 - 10x + 16 = 0$

- ☐ A  $x = 1.6$
- ☐ B  $x = -4$
- ☐ C  $x = 8$  or  $x = 2$
- ☐ D  $x = -8$  or  $x = -2$

☒ ☐ X **Revise page 47**

## 29 Simultaneous equations

Solve the simultaneous equations

$$\begin{aligned} 5x + 6y &= 5 \\ x - 2y &= 9 \end{aligned}$$

- ☐ A  $x = -3, y = 1.5$
- ☐ B  $x = 4, y = -2.5$
- ☐ C  $x = 2.5, y = 5$
- ☐ D  $x = -3, y = -1.5$

☒ ☐ X **Revise page 49**

## 30 Rearranging formulae

$$M = 6R - 20$$

Rearrange the formula to make R the subject.

- ☐ A  $R = \frac{M + 20}{6}$
- ☐ B  $R = 6M + 20$
- ☐ C  $R = \frac{M}{6} + 20$
- ☐ D  $R = \frac{1}{6}(M - 20)$

☒ ☐ X **Revise page 50**



## Knowledge check

### 31 Proof

$n$  is an integer.

Which of the following is an even number?

- ☐ A  $(n + 1)(n - 1)$     ☐ B  $2n - 1$   
☐ C  $(n + 1)^2$     ☐ D  $(n + 1) + (n - 1)$



☒ Revise pages 51, 52

## Ratio and proportion

### 32 Percentages

Work out 15% of £900.

- ☐ A £145    ☐ B £1035  
☐ C £135    ☐ D £180



☒ Revise pages 55, 56

### 35 Converting units

Convert 2.8 km into metres.

- ☐ A 2800 m    ☐ B 280 m  
☐ C 28 m    ☐ D 0.28 m



☒ Revise page 61

### 33 Percentage change

Jacob's luggage weighs 25 kg.

He reduces the weight of his luggage by 12%.

What is the new weight of Jacob's luggage?

- ☐ A 20 kg    ☐ B 13 kg  
☐ C 22 kg    ☐ D 3 kg



☒ Revise pages 57, 58

### 36 Reverse percentage change

In a sale, prices are reduced by 20%.

The sale price of a phone is £144.

Work out its original price.

- ☐ A £180    ☐ B £172.80  
☐ C £192    ☐ D £115.20



☒ Revise page 62

### 34 Ratio

The ratio of juice to water in a drink is 3:2

The total amount of drink is 600 ml.

How much juice is in the drink?

- ☐ A 200 ml    ☐ B 360 ml  
☐ C 400 ml    ☐ D 450 ml



☒ Revise pages 59, 60

### 37 Exponential growth

Alison invests £800 in a savings account, which pays 2.5% compound interest.

Work out the amount Alison has in her account after 4 years.

Give your answer to the nearest pound.

- ☐ A £883    ☐ B £861  
☐ C £1953    ☐ D £880



☒ Revise page 63



**38 Speed**

A cyclist travels 84 km at an average speed of 15 km/h.

Work out the total time taken.

- ☐ A 4.5 hours      ☐ B 0.18 hours  
☐ C 1260 hours      ☐ D 5.6 hours

☒ **Revise page 64**

**39 Density and compound measures**

A brass ornament has a volume of  $120 \text{ cm}^3$ .  
The density of brass is  $8.6 \text{ g/cm}^3$ .

Work out the mass of the ornament.

- ☐ A 14.0 g      ☐ B 0.07 g  
☐ C 516 g      ☐ D 1032 g

☒ **Revise pages 65, 66**

**40 Proportion**

It takes 6 workers a total of 12 days to build a wall.

How long would it take 4 workers to build the same wall, if they worked at the same rate?

- ☐ A 8 days      ☐ B 16 days  
☐ C 18 days      ☐ D 24 days

☒ **Revise pages 67, 68**

**Geometry and measures**

**41 2D shapes**

Which of the following shapes can have **no** lines of symmetry?

- ☐ A rhombus      ☐ B parallelogram  
☐ C rectangle      ☐ D kite

☒ **Revise pages 71, 72**

**42 Angle facts**

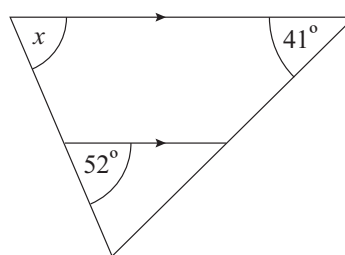
Which one of the following is **not** a true angle fact?

- ☐ A Angles in a triangle add up to  $180^\circ$   
☐ B Angles on a straight line add up to  $180^\circ$   
☐ C Angles around a point add up to  $180^\circ$   
☐ D Vertically opposite angles are equal

☒ **Revise page 73**

**43 Angle properties**

Work out the size of the angle marked  $x$ .



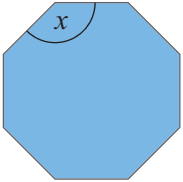
- ☐ A  $41^\circ$       ☐ B  $87^\circ$   
☐ C  $38^\circ$       ☐ D  $52^\circ$

☒ **Revise pages 74, 75**

## Knowledge check

### 44 Angles in polygons

The diagram shows a regular octagon. Work out the size of the angle marked  $x$ .



- ☐ A  $135^\circ$       ☐ B  $45^\circ$   
☐ C  $145^\circ$       ☐ D  $315^\circ$

☒ **Revise page 76**

### 45 Measures

Here is part of a bus timetable.

Felixstowe	0920	0940
Heath Road	0950	1010
Ipswich	1008	1028

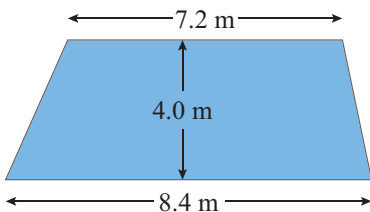
How long is the journey from Felixstowe to Ipswich?

- ☐ A 18 minutes      ☐ B 30 minutes  
☐ C 48 minutes      ☐ D 38 minutes

☒ **Revise pages 77, 78**

### 46 Perimeter and area

Work out the area of this trapezium.

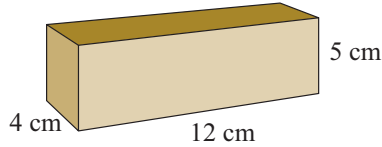


- ☐ A  $33.6\text{m}^2$       ☐ B  $62.4\text{m}^2$   
☐ C  $31.2\text{m}^2$       ☐ D  $37.2\text{m}^2$

☒ **Revise pages 79, 81**

### 47 Volumes of 3D solids

Work out the volume of this cuboid.

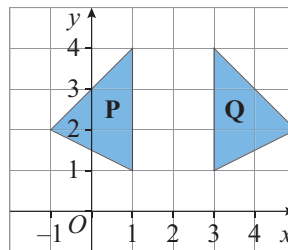


- ☐ A  $48\text{ cm}^2$       ☐ B  $120\text{ cm}^3$   
☐ C  $240\text{ cm}^3$       ☐ D  $80\text{ cm}^3$

☒ **Revise pages 82, 83**

### 48 Transformations

Describe fully the single transformation that maps triangle P onto triangle Q.

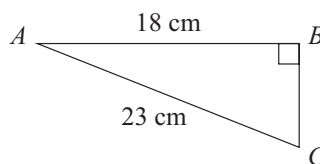


- ☐ A Reflection  
☐ B Rotation  
☐ C Rotation  $180^\circ$  about  $(2, 2.5)$   
☐ D Reflection in the line  $x = 2$

☒ **Revise pages 86, 88**

### 49 Pythagoras' theorem

Work out the length of  $BC$  in this right-angled triangle, correct to 1 decimal place.

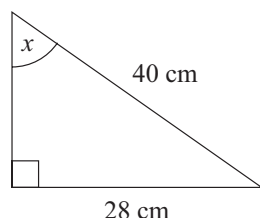


- ☐ A 5.0 cm      ☐ B 14.3 cm  
☐ C 29.2 cm      ☐ D 205.0 cm

☒ **Revise pages 90, 91**

**50 Trigonometry**

Work out the size of the angle marked  $x$  in this right-angled triangle, to the nearest degree.

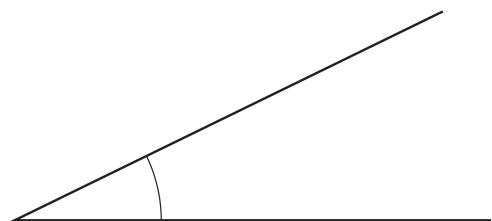


- ☐ A  $55^\circ$       ☐ B  $35^\circ$   
☐ C  $46^\circ$       ☐ D  $44^\circ$

☒ ☒ **Revise pages 92, 94**

**51 Measuring**

Measure this angle correct to the nearest degree.



- ☐ A  $26^\circ$       ☐ B  $27^\circ$   
☐ C  $154^\circ$       ☐ D  $155^\circ$

☒ ☒ **Revise pages 95, 96**

**52 Bearings**

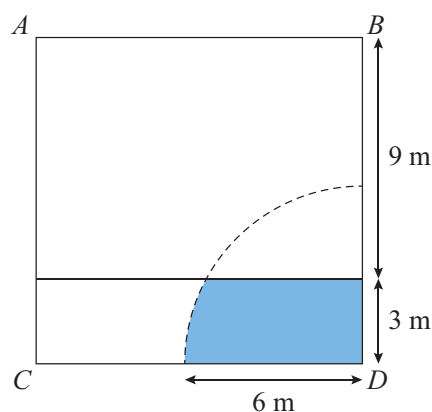
The bearing of point  $P$  from point  $Q$  is  $208^\circ$ .  
Find the bearing of point  $Q$  from point  $P$ .

- ☐ A  $018^\circ$       ☐ B  $28^\circ$   
☐ C  $028^\circ$       ☐ D  $388^\circ$

☒ ☒ **Revise pages 98, 102**

**53 Loci and constructions**

Which of the following describes the points in the shaded region?



- ☐ A Closer to  $D$  than  $A$  and at least 9 m from  $AB$   
☐ B Less than 3 m from  $CD$  and less than 6 m from  $D$   
☐ C At least 9 m from  $AB$  and less than 6 m from  $D$   
☐ D Less than or equal to 6 m from  $D$  and less than 3 m from  $CD$

☒ ☒ **Revise pages 99, 101**

**54 Areas of circles**

A circle has a radius of 10 cm.  
Work out the area of the circle.  
Give your answer to 3 significant figures.

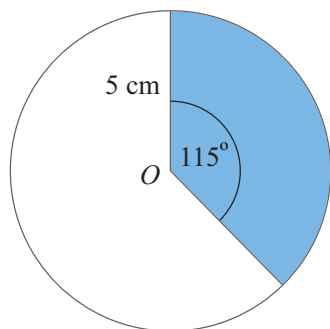
- ☐ A  $31.4 \text{ cm}^2$       ☐ B  $314 \text{ cm}^2$   
☐ C  $78.5 \text{ cm}^2$       ☐ D  $100 \text{ cm}^2$

☒ ☒ **Revise pages 103, 104**

## Knowledge check

### 55 Sectors of circles

The diagram shows a circle with centre  $O$  and radius 5 cm.



Work out the area of the shaded sector to 3 significant figures.

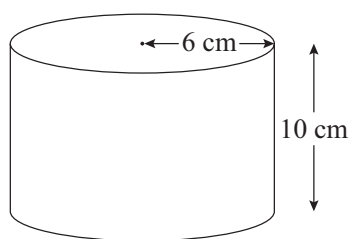
- ☐ A 26.2 cm<sup>2</sup>      ☐ B 7.98 cm<sup>2</sup>  
☐ C 25.1 cm<sup>2</sup>      ☐ D 627 cm<sup>2</sup>



Revise page 105

### 56 Cylinders

Work out the volume of this cylinder, to the nearest cm<sup>3</sup>.



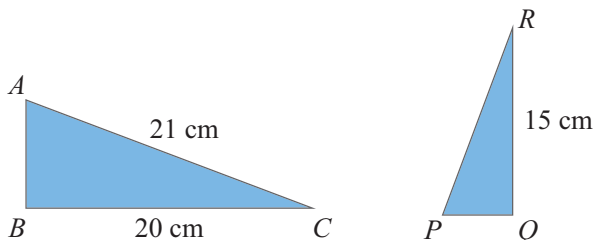
- ☐ A 377 cm<sup>3</sup>      ☐ B 1131 cm<sup>3</sup>  
☐ C 360 cm<sup>3</sup>      ☐ D 1885 cm<sup>3</sup>



Revise pages 106, 108

### 57 Similar shapes

The diagram shows two similar triangles.



Find the length of side  $PR$ .

- ☐ A 18 cm      ☐ B 14.3 cm  
☐ C 20 cm      ☐ D 15.75 cm



Revise page 110

### 58 Congruency

Which of the following is **not** a condition of congruency for triangles?

- ☐ A All three angles equal  
☐ B Two sides and the included angle equal  
☐ C All three sides equal  
☐ D Right-angle with hypotenuse and one other side equal



Revise pages 109, 111

### 59 Vectors

$$\mathbf{p} = \begin{pmatrix} -2 \\ 5 \end{pmatrix} \text{ and } \mathbf{q} = \begin{pmatrix} 3 \\ -3 \end{pmatrix}$$

Work out the vector  $\mathbf{p} - 2\mathbf{q}$

- ☐ A  $\begin{pmatrix} 4 \\ -1 \end{pmatrix}$       ☐ B  $\begin{pmatrix} -1 \\ 8 \end{pmatrix}$   
☐ C  $\begin{pmatrix} -4 \\ 8 \end{pmatrix}$       ☐ D  $\begin{pmatrix} -8 \\ 11 \end{pmatrix}$



Revise page 112

## Statistics and probability

### 60 Two-way tables

This two-way table shows the male and female members of a class.

	Left-handed	Right-handed	Total
Girls	2	3	9
Boys		12	
Total	5	16	

How many boys were in the class in total?

- ☐ A 12                      ☐ B 15  
☐ C 3                        ☐ D 27

☒ ☐ X **Revise page 115**

### 61 Representing data

This pictogram shows the amounts of money raised by two students in a sponsored swim.

Nicola	⊙ ⊙ ⊙ ⊙ ⊙ ⊙
Amir	⊙ ⊙ ⊙ ⊙

Key: ⊙ represents £10

How much did Nicola raise?

- ☐ A £55                      ☐ B £50  
☐ C £60                      ☐ D £110

☒ ☐ X **Revise pages 116, 117**

### 62 Pie charts

A group of 100 students were asked their favourite colour.

Bertie draws a pie chart to show the results. 35 students chose blue.

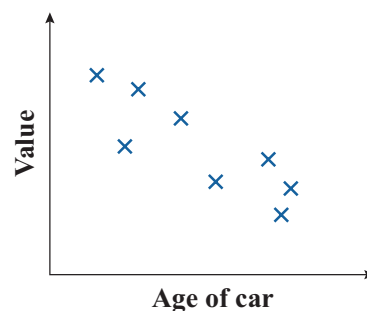
What angle will the sector for blue be on Bertie's pie chart?

- ☐ A 35°                      ☐ B 105°  
☐ C 90°                      ☐ D 126°

☒ ☐ X **Revise page 118**

### 63 Scatter graphs

Describe the relationship shown on this scatter graph.



- ☐ A Exponential decay  
☐ B Positive correlation  
☐ C Direct proportion  
☐ D Negative correlation

☒ ☐ X **Revise page 119**

### 64 Averages and range

The stem-and-leaf diagram shows the weights of 10 satsumas.

6	4 9
7	0 1 5 5 6 9
8	2 4 7 7 7 8 8
9	0 1 3 6

Key: 6 | 4 means 64 grams

Work out the mean of the weights.

- ☐ A 76.1 g                      ☐ B 23 g  
☐ C 75 g                        ☐ D 5.1 g

☒ ☐ X **Revise pages 120, 124**

## Knowledge check

### 65 Averages from tables

The table shows the number of goals scored by a team in 40 matches.

Goals	0	1	2	3	4
Frequency	11	15	8	5	1

Work out the mean number of goals scored per match.

- ☐ A 2 goals      ☐ B 8 goals  
☐ C 1.25 goals      ☐ D 2.5 goals

☒ ☒ **Revise pages 121, 122**

### 68 Probability and outcomes

The table shows the probability of each score on a biased dice.

Score	1	2	3	4	5	6
Probability	0.1	0.1	0.1	0.1	$x$	$x$

Ravi rolls the dice. Work out the probability that it lands on 6.

- ☐ A 0.2      ☐ B 0.3  
☐ C 0.36      ☐ D 1.2

☒ ☒ **Revise page 128**

### 66 Collecting data

Which of the following **does not** describe a random sample?

- ☐ A Writing names in alphabetical order and choosing the first ten names  
☐ B Assigning a number to each person and using a random number generator  
☐ C Choosing names out of a hat  
☐ D Asking each person to flip a coin and selecting anyone who gets heads

☒ ☒ **Revise page 125**

### 69 Independent events

A bag contains 7 black counters and 3 white counters.

Jenna chooses a counter at random, then replaces it.

She then picks a second counter at random.

Work out the probability that she picks **two** white counters.

- ☐ A  $\frac{6}{10}$       ☐ B  $\frac{9}{49}$   
☐ C  $\frac{6}{20}$       ☐ D  $\frac{9}{100}$

☒ ☒ **Revise pages 129, 130, 133**

### 67 Basic probability

A fair six-sided dice is rolled.

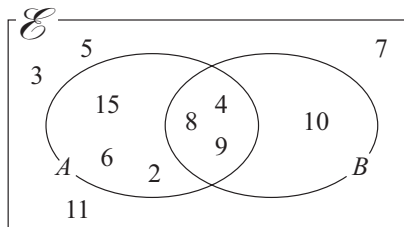
Work out the probability of landing on an even number.

- ☐ A 3      ☐ B  $\frac{1}{6}$   
☐ C  $\frac{1}{2}$       ☐ D 0.3

☒ ☒ **Revise page 127**

### 70 Venn diagrams

A number is chosen at random from this Venn diagram.



Work out the probability that it is a member of the set  $A \cup B$ .

- ☐ A  $\frac{7}{11}$       ☐ B  $\frac{3}{11}$   
☐ C  $\frac{3}{7}$       ☐ D  $\frac{6}{11}$

☒ ☒ **Revise pages 131, 132**

Answers to the Knowledge check are on the back cover (page 20) of this booklet

## My catch-up plan

Use this page to make your own customised catch-up plan. Write down all the pages that you plan to revise, then use the tick boxes to track your progress.

[illegible][illegible]



# Notes

Use these pages to make any other catch-up notes you need. You could list topics that you know you need extra help with, or make a note of any facts or definitions you are struggling to remember. Or you could use them to record dates and times of catch-up sessions, extra tutorials or study periods.



# Matching chart

You can use this chart to help you choose pages for your catch-up plan. Tick the units and topics you want to revise, and then add the pages listed to your plan on page 15.

Unit / topic	Revision Guide / Workbook pages	Revise? <input checked="" type="checkbox"/>
<b>Unit 1: Number</b>		<input type="checkbox"/>
Integers and place value	1, 2, 4, 5, 16	<input type="checkbox"/>
Decimals	3, 6, 7, 10	<input type="checkbox"/>
Indices, powers and roots	8, 9	<input type="checkbox"/>
Factors, multiples and primes	11, 12, 13	<input type="checkbox"/>
<b>Unit 2: Algebra</b>		<input type="checkbox"/>
Algebra: the basics	22, 23, 24, 25	<input type="checkbox"/>
Expanding and factorising single brackets	28, 29	<input type="checkbox"/>
Expressions and substitution into formulae	25, 26, 27	<input type="checkbox"/>
<b>Unit 3: Graphs, tables and charts</b>		<input type="checkbox"/>
Tables	77, 115, 121, 122	<input type="checkbox"/>
Charts and graphs	116, 117, 123, 124	<input type="checkbox"/>
Pie charts	118	<input type="checkbox"/>
Scatter graphs	119	<input type="checkbox"/>
<b>Unit 4: Fractions and percentages</b>		<input type="checkbox"/>
Fractions	13, 14	<input type="checkbox"/>
Fractions, decimals and percentages	55, 56	<input type="checkbox"/>
Percentages	55, 57, 58	<input type="checkbox"/>
<b>Unit 5: Equations, inequalities and sequences</b>		<input type="checkbox"/>
Equations	30, 31, 51	<input type="checkbox"/>
Inequalities	32, 33	<input type="checkbox"/>
Sequences	34, 35	<input type="checkbox"/>
<b>Unit 6: Angles</b>		<input type="checkbox"/>
Properties of shapes, parallel lines and angle facts	71, 72, 73, 74, 75, 95	<input type="checkbox"/>
Interior and exterior angles of polygons	76	<input type="checkbox"/>
<b>Unit 7: Averages and range</b>		<input type="checkbox"/>
Statistics and sampling	125	<input type="checkbox"/>
The averages	120, 121, 122, 126	<input type="checkbox"/>

If your school follows the Pearson Edexcel two- or three-year scheme of work, you can use the shading on the left-hand side of the table to help you find the topics you are most likely to have missed between spring half term and the summer holiday. You can also check with your teacher to find out exactly which topics you should have covered during lockdown.

Unit / topic	Revision Guide / Work-book pages	Revise? <input checked="" type="checkbox"/>
<b>Unit 8: Perimeter, area and volume 1</b>		<input type="checkbox"/>
Perimeter and area	61, 79, 80, 81, 84, 85	<input type="checkbox"/>
3D forms and volume	82, 83, 84, 85	<input type="checkbox"/>
<b>Unit 9: Graphs</b>		<input type="checkbox"/>
Real-life graphs	37, 40, 41, 42	<input type="checkbox"/>
Straight-line graphs	36, 37, 38, 39	<input type="checkbox"/>
<b>Unit 10: Transformations</b>	86, 87, 88, 89	<input type="checkbox"/>
<b>Unit 11: Ratio and proportion</b>	59, 60, 67, 68	<input type="checkbox"/>
<b>Unit 12: Right-angled triangles</b>		<input type="checkbox"/>
Pythagoras' theorem	90, 91	<input type="checkbox"/>
Trigonometry	92, 93, 94	<input type="checkbox"/>
<b>Unit 13: Probability</b>		<input type="checkbox"/>
Probability and counting	19, 127, 128, 129	<input type="checkbox"/>
Representing probabilities and outcomes	130, 131, 132, 133	<input type="checkbox"/>
<b>Unit 14: Multiplicative reasoning</b>		<input type="checkbox"/>
More percentages	62, 63	<input type="checkbox"/>
Rates of change and compound measures	64, 65, 66, 68	<input type="checkbox"/>
<b>Unit 15: Constructions, loci and bearings</b>		<input type="checkbox"/>
Plans and elevations	82, 95, 96, 97	<input type="checkbox"/>
Constructions, loci and bearings	98, 99, 100, 101, 102	<input type="checkbox"/>
<b>Unit 16: Quadratic equations and graphs</b>		<input type="checkbox"/>
Quadratic equations: expanding and factorising	43, 46, 47	<input type="checkbox"/>
Quadratic graphs	44, 45	<input type="checkbox"/>
<b>Unit 17: Perimeter, area and volume 2</b>		<input type="checkbox"/>
Circles	103, 104, 105	<input type="checkbox"/>
Cylinders, cones and spheres	106, 107, 108	<input type="checkbox"/>
<b>Unit 18: Fractions, indices, standard form</b>	15, 17, 18	<input type="checkbox"/>
<b>Unit 19: Congruence, similarity, vectors</b>	109, 110, 111, 112	<input type="checkbox"/>
<b>Unit 20: More algebra</b>	48, 49, 50, 51, 52	<input type="checkbox"/>

Two-year scheme of work units

Three-year scheme of work units

# Knowledge check answers

1 B	2 A	3 D	4 D	5 B
6 A	7 B	8 C	9 C	10 A
11 C	12 A	13 D	14 D	15 B
16 B	17 B	18 D	19 D	20 A
21 D	22 B	23 B	24 A	25 C
26 A	27 C	28 C	29 B	30 A
31 D	32 C	33 C	34 B	35 A
36 A	37 A	38 D	39 D	40 C
41 B	42 C	43 D	44 A	45 C
46 C	47 C	48 D	49 B	50 D
51 A	52 C	53 C	54 B	55 C
56 B	57 D	58 A	59 D	60 B
61 A	62 D	63 D	64 A	65 C
66 A	67 C	68 B	69 D	70 A

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