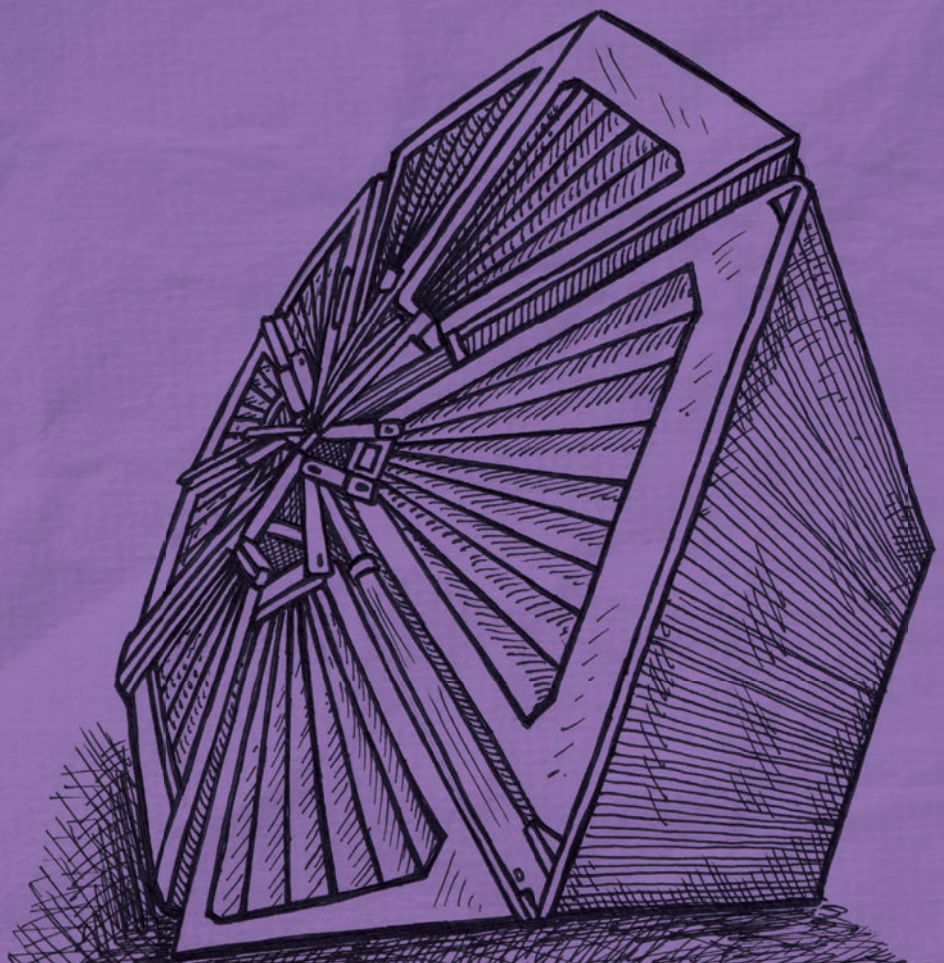# REVISE EDEXCEL FUNCTIONAL SKILLS LEVEL 1

Mathematics

REVISION WORKBOOK

REVISE EDEXCEL
FUNCTIONAL SKILLS LEVEL 1

Mathematics

REVISION WORKBOOK

Series Consultant: Harry Smith

Author: Navtej Marwaha

- -

To revise all the topics covered in this book, check out:

Revise Functional Skills Level 1
Mathematics Revision Guide   9781292145693

THE REVISE SERIES
For the full range of Pearson revision titles, visit:
www.pearsonschools.co.uk/revise

Pearson

Contents

A small bit of small print

Edexcel publishes Sample Test Materials on its website. This is the official content and this book should be used in conjunction with it. The questions in this book have been written to help you practise what you have learned in your revision. Remember: the real test questions may not look like this.

Had a go ☐　　**Nearly there** ☐　　**Nailed it!** ☐

Online test preparation

GUIDED　**1**　Match the icons with the correct statements. One has been done for you.

⏰ Time	moves you to the previous question
❓ Help	moves you to the next question
Ⓐ Review	ends the test
✓ Flag	gives a demonstration of how the online test works
◀ Previous	highlights a question you want to come back to
▶ Next	tells you how much time is left on the test
⚠ Quit	shows you all your flagged questions

2　Look at this menu.
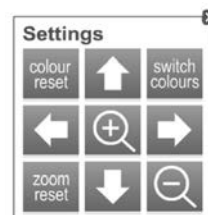
What happens when the following buttons are pressed?

(a) arrows　　...

(b) magnifying glass　　...

(c) colour reset　　...

(d) zoom reset　　...

(e) switch colours　　...

3　Complete these statements.

(a) During the test you will be reminded when you have .... minutes left

and again when you have .... minutes left.

(b) When you click on the help button, the .... does not stop.

(c) If the test is not clear to read, use the .... icon to change

the ...., or .... in or out.

Had a go ☐   Nearly there ☐   Nailed it! ☐

Online test tools

1   Explain the use of the following test tools during your test.

(a)

....

....

(b)

....

....

2   You are asked to organise a time plan for a day of events.

| Playground | Story time | Drawing | Games | Nap |

	Session 1	Session 2	Session 3	Session 4	Session 5
Group A					
Group B					
Group C					
Group D					

You decide to move 'Story time' to Session 1, Group A. How do you do this?

....

....

3   You are asked to place the home cinema on a plan so that it covers an area of 3 squares by 2 squares.

How would you do this?

home cinema

....

....
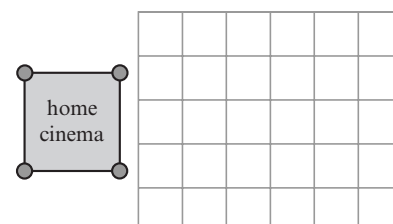
4   How do you change the position of points on a line graph?

....

....

Had a go ☐   **Nearly there** ☐   **Nailed it!** ☐

Using the onscreen calculator

> **GUIDED**   **1**   Use your calculator to work out the value of these calculations. Write down the buttons you press and the answer you get.

     (a) $\dfrac{80 + 44 \times 4}{0.25}$ $(80 + 44 \times 4) \div 0.25 = $ ....

     (b) $8 \times (6 - 2) + \dfrac{6}{2}$ ....

> **GUIDED**   **2**   Crisps cost 40p per packet. A bottle of lemonade costs £1.30. Mike buys 6 packets of crisps and one bottle of lemonade. He pays with a £5 note.

     Work out how much change he should get. Show the buttons that you press on the calculator to find the answer.

     $5 - (6 \times 0.4 + 1.30) = $ ....

3   A machine makes 35 bolts every hour. The machine makes bolts for 8 hours each day, 5 days a week. The bolts are packed into boxes. Each box holds 25 bolts.

     How many boxes are needed for all the bolts made each week? Show the buttons that you press on the calculator to find the answer.

     ....

     ....

     ....

4   28 children and 4 teachers went to the zoo. The cost of a ticket for a child was £7.49 and the cost of a ticket for a teacher was £13.99.

     What is the total cost to get into the zoo? Show the buttons that you press on the calculator to find the answer.

     ....

     ....

     ....

5   Plain tiles cost £1.35 each and patterned tiles cost £4.85 each. Bernie buys 325 plain tiles and 48 patterned tiles.

     Use a calculator to work out the total cost of the tiles. Show the buttons that you press on the calculator to find the answer.

> Be careful when using a calculator to carry out a long calculation. Make sure you use the correct order of operations.

     ....

     ....

     ....

Had a go ☐   **Nearly there** ☐   **Nailed it!** ☐

Number and place value

GUIDED 1 Write the following numbers in words.

  (a) 45 672

    Forty-five..

  (b) 743 508

    ....

GUIDED 2 Write the following numbers in figures.

  (a) four hundred and six thousand, three hundred and fifty-three

    406...

  (b) five million, seven hundred and thirty-four thousand, nine hundred and one

    ....

3 For each of these numbers, write down the value of the digit 4 in figures.

  (a) 743   ....

  (b) 64 799   ....

  (c) 3004   ....

4 Sandeep weighs two parcels. Parcel A weighs 6435 grams and parcel B weighs 6354 grams. Which parcel is heavier?

    ....

    ....

5 The table gives information about the prices of five houses.

House	A	B	C	D	E
Price	£326,500	£278,499	£289,995	£326,550	£289,905

Write down the prices of the houses in order, starting from the least expensive.

    ....

    ....

Had a go ☐   Nearly there ☐   Nailed it! ☐

Negative numbers

GUIDED **1** Write down the smallest and the largest number in each list.

(a) −4, −3, −8, −2, −9

smallest: ....   largest: ....

(b) −12, −48, −18, −15, −53

smallest: ....   largest: ....

> On a number line, the numbers get **smaller** as you go to the **left**.

GUIDED **2** Write the following numbers in order from smallest to largest.

7   −13   −7   −1   −2

−13   ....

3 This table gives information about the melting and boiling points of five chemical elements.

Element	Chlorine	Hydrogen	Mercury	Nitrogen	Oxygen
Melting point (°C)	−102	−260	−39	−210	−219
Boiling point (°C)	−34	−252	356	−196	−183

Write down the name of the element that has:

(a) the lowest boiling point   ....

(b) the highest melting point.   ....

4 David writes down his bank balance at the end of each month for the first 6 months of the year.

Month	Jan	Feb	Mar	Apr	May	Jun
Balance (£)	−127	−48	−579	−383	−326	−398

Write down the months in order, starting with the most overdrawn and finishing with the least overdrawn.

....

....

Had a go ☐   Nearly there ☐   Nailed it! ☐

Rounding

1   Round the following numbers to the nearest ten.

    (a) 43 ....

    (b) 2786 ....

2   Round the following numbers to the nearest hundred.

    (a) 143 ....

    (b) 5869 ....

    (c) 57 168 ....

3   Round the following numbers to the nearest thousand.

    (a) 5869 ....

    (b) 43 014 ....

    (c) 623 482 ....

4   Anjali measured the weight of some objects made out of different types of materials in her engineering class. Here are her results.

Material	wood	plastic	metal
Weight (g)	21	2665	15 423

Round the weight of each material to the value stated.

    (a) Weight of wood to the nearest ten grams = ...

    (b) Weight of plastic to the nearest hundred grams = ...

    (c) Weight of metal to the nearest thousand grams = ...

5   Alan is weighing some flour on an electronic scale. Here is the display:
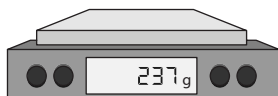
He records the weight as 24 grams correct to the nearest ten. Is he correct? Explain your answer.

....

....

Had a go ☐   Nearly there ☐   Nailed it! ☐

Adding and subtracting

GUIDED **1** Simon received £325 on his birthday. He spent £179 on booking a holiday.

How much money does he have left?

£325 − £179 = £...........................

2 There are 54 children on the pirate ship at a fairground. When the pirate ship stops, 38 children get off and 26 children get on. How many children are now on the pirate ship?

> Subtract the number of children who get off and add the number who get on.

....

....

GUIDED **3** Carl buys some electrical items online. He buys a television costing £395, a DVD player costing £196, a sound bar costing £239. The electrical store charges £28 for delivery.

What is the total cost of the goods including the delivery charge?

£395 + £196 + ...

....

4 Part of this receipt is missing.

David gave the shopkeeper £750 and received £5 change.

David works out that the table must have cost £329

Look at the receipt. Is David correct? Explain your answer.

Sofa	£387
Rug	£129
Table	£

....

....

....

5 At the beginning of January, Mark had £1,840 in his bank account.

This table shows information about the amount of money he has withdrawn each month for four months.

Month	Jan	Feb	Mar	Apr
Withdrawn (£)	478	329	395	472

How much money is left in his bank account?

....

....

....

Had a go ☐ Nearly there ☐ Nailed it! ☐

Multiplying and dividing by 10, 100 and 1000

> **GUIDED** **1** Work out the answers to these calculations.

   (a) A packet contains 10 sweets. How many sweets are in nine packets?

   10 × ....

   (b) Each jigsaw puzzle has 1000 pieces. Tom has 7000 pieces.

   How many jigsaw puzzles does Tom have?

   ....

2 Brian measured the length of his wardrobe door. The length of the wardrobe door was 1200 mm. He first made a scale drawing. The length of the door he drew was one hundred times smaller than the actual length of the door.

What is the length of the door he drew?

....

3 Four friends want to book a holiday for as little money as possible. They go to two high-street shops.

Top Choice
10 days @ £55 per person per night including flights and tax.

Travel Holidays
Price for two people:
10 days hotel   £1,000
Flights   £100
Tax   £10

Where should the four friends book their holiday if they want to pay as little money as possible?

....

....

4 A site manager wants to order some materials. The table shows information about the cost and quantity.

Item	Cost (£)	Quantity
bricks	120	1000
plasterboards	60	10
bolts	8	10

He orders 10 000 bricks, 10 plasterboards and 1000 bolts. What is the total cost of the order?

....

Multiplication and division

GUIDED 1   A florist sold 48 boxes of flowers. Each box contained 16 flowers.

Work out the total number of flowers sold.

total number = 48 × ....

2   Amy packs tins of fruit into boxes. Each box holds 32 tins.

How many boxes will be needed to pack:

(a)   192 tins?   ....

(b)   448 tins?   ....

3   A company pays some of its workers a bonus. The total amount paid out in bonuses is £11,700. This amount is split evenly between 12 workers.

How much does each worker receive?

....

....

4   343 students are going on a trip. At least one teacher must go with every 21 students.

Work out the smallest number of teachers that must go.

| Remember you need a whole number of teachers. Round up your answer to the next whole number. |

....

....

5   The cost price of a pram is £45. The shop sells these prams for £62. This table gives information about the number of prams sold each day in one week.

Day	Mon	Tue	Wed	Thu	Fri
Number sold	4	7	3	9	8

Work out the total profit for this week.

....

....

....

Squares and multiples

GUIDED **1** Write down all the square numbers up to 100

$1^2 = 1$ $2^2 = 4$ $3^2 =$ ....

....

GUIDED **2** Write down the first ten multiples of:

(a) 8   8   16   ....

(b) 17   ....

(c) 28   ....

3 Choose one number from the box that fits each description.

(a) a multiple of 4 and a multiple of 5

....

(b) a square number and an odd number.

....

21	20	25
11	8	6
10	15	32

GUIDED **4** Find the lowest common multiples of:

(a) 6 and 9   6, 12, 18, 24… 9, 18, 27… LCM = ...

(b) 12 and 15 ....

(c) 28 and 42 ....

5 Jemima wants to make hot dogs. Hot dog sausages are sold in packs of 15 and hot dog buns are sold in packs of 8.

Work out the smallest number of packs of sausages and buns she can buy to make complete hot dogs without any buns or sausages left over.

> Write down the multiples of 15 and 8, and then find the LCM.

....

....

....

Estimating

> **GUIDED**   **1**   Work out an estimate for the value of: [Round both values.]

    (a) $93 + 48 \approx 90 + 50 =$ ....

    (b) $937 - 82 \approx$ ....

    (c) $178 \times 58 \approx$ ....

    (d) $37.9 \div 4.95 \approx$ ....

2   Estimate each person's annual salary.   [How many weeks are there in a year?]

    (a) David earns £288 per week. His annual salary is about ....

    (b) Ethan earns £1628 per month. His annual salary is about ....

3   A farmer bought 3179 kg of fertiliser at a cost of £17 per kilogram.

    Estimate the total cost of the fertiliser.

    ....

4   A litre of detergent will clean a patio area of about $14 \, m^2$.

    Estimate how many 1 litre cans are needed to clean a patio area of $123 \, m^2$.

    ....

5   Pam sold 378 radiators for £58 each. She paid £32 each for them.

    Estimate how much profit she made.

    ....

6   One type of coin weighs 12 g.

    (a) Estimate the weight of a bag containing 167 of these coins.

    ....

    (b) Estimate the number of these coins in a bag that weighs 983 g.

    ....

7   A machine operator makes 74 bolts every hour. He works 39 hours each week for 48 weeks of the year.

    Estimate the number of bolts he makes in one year.

    ....

    ....

Number

Had a go ☐   Nearly there ☐   Nailed it! ☐

Checking your answer

GUIDED   **1**   Use estimation to check whether the following statements are likely to be correct.

> If the number is between 10 and 99, round to the nearest 10
>
> If the number is between 100 and 999, round to the nearest 100

(a) 68 + 93 = 161   70 + 90 = 160 so 161 is likely to be correct.

(b) 438 − 59 = 379   400 −..

(c) 672 + 543 – 283 = 932   ....

GUIDED   **2**   Use inverse operations to check if the following statements are correct.

(a) 600 – 319 = 281   281 + 319 = ...

(b) 550 + 254 = 804   ....

(c) 963 ÷ 3 = 312   ....

(d) 211 × 12 = 252   ....

3   Alice worked out that the answer to 81 × 29 ÷ 41 is 57 to the nearest whole number. Use estimation to decide whether she is likely to be correct.

....

....

4   Part of Leon's bank statement is shown below.

	Debit	**Credit**
balance brought forward		£841
restaurant	£78	
football tickets	£167	

Leon has lost the page which shows his current balance. He wants to pay for a holiday that costs £428.

Use estimation to decide whether he has enough money in his account to pay for the holiday.

....

....

....

Word problems

GUIDED

1 Rowan is going to buy a second-hand motorbike. The salesperson says Rowan can pay in cash or use a finance deal.

cash price
£14,250

finance deal
deposit of £2,500 +
36 monthly payments of £350

Is it cheaper to buy the motorbike with cash or with the finance deal?

2500 + (36 × ....

....

2 Eve and four of her friends want to raise £750 for charity. This table shows how much Eve's friends have raised.

Name	Shahab	Pavan	Govind	Drew
Amount raised	£192	£180	£67	£154

(a) How much money does Eve need to raise so that they have reached their target?

....

....

(b) Eve is going to swim lengths to raise the rest of the money. She will receive £6 for each length. She works out that she has to swim 26 lengths to bring the total above £750.

Is Eve correct? You must show your working.

....

....

4 Frank is planning a trip to a safari park for 6 adults and 12 children.
Here are the admission charges:

Safari park admission charges		
Adult	£26	Buy two tickets and get one free
Child	£17	Buy three tickets and get one free

The budget for the trip is £260. Is this enough money?

....

....

Fractions

> **GUIDED** **1** Write down what fraction is shaded and what fraction is not shaded.

(a)

shaded $= \dfrac{3}{\square}$

unshaded $= \dfrac{\square}{16}$
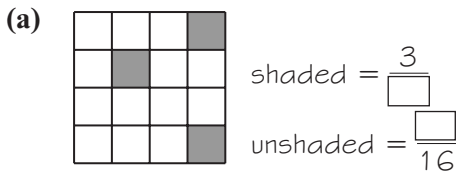
> The denominator should be the total number of shapes.

(b)

shaded = ...

unshaded = ...

2 James has a bag of shapes.

What fraction of the shapes are:

(a) triangles?   ....

(b) rectangles?   ....

(c) circles?   ....
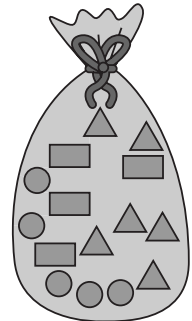
3 Simran is making a cake. She needs $\frac{1}{3}$ of a kilogram of sugar. She can buy packets of sugar in the following sizes: $\frac{1}{2}$ kg, $\frac{1}{5}$ kg and $\frac{1}{4}$ kg.

What size of packet should she buy to ensure that she has enough sugar?

....

....

....

4 A box contains chocolates. There are $\frac{27}{80}$ square dark chocolates and $\frac{17}{80}$ round milk chocolates. There are 40 dark chocolates and 40 milk chocolates.

Complete the table.

	Square	**Round**	**Total**
Dark			
Milk			
Total			

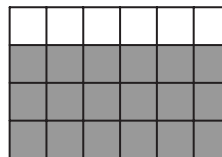Had a go ☐   Nearly there ☐   Nailed it! ☐
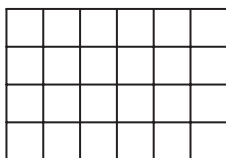
Equivalent fractions

GUIDED **1** **(a)** What fraction of this shape is shaded?

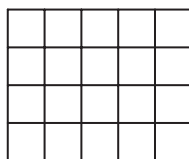Write your answer as two equivalent fractions.

$\dfrac{\boxed{}}{24}$ or $\dfrac{3}{\boxed{}}$

(b) Shade $\dfrac{2}{3}$ of this shape.

2 On the grids below, shade $\dfrac{3}{4}$ and $\dfrac{4}{5}$. Which is the smaller fraction?
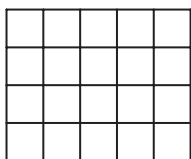
The smaller fraction is ....

3 Which fraction is larger, $\dfrac{3}{5}$ or $\dfrac{2}{3}$?

> First find the lowest common denominator.

....

....

....

4 Anna had a pizza that was cut into 8 equal slices. She ate 3 of them. Bill had a pizza that was the same size, but his was cut into 4 equal slices. He also ate 3 slices.

Who ate more pizza, Anna or Bill?

....

....

....

5 During a practice session, a trainer asks athletes to jog a certain number of laps.
Sarah jogged $\dfrac{3}{4}$ of the laps. Jason jogged $\dfrac{3}{5}$ of the laps. Tim jogged $\dfrac{1}{2}$ of the laps.

Order the fractions from smallest to largest.

....

....

....

Mixed numbers

GUIDED **1** Change each mixed number into an improper fraction.

(a) $3\frac{1}{5}$ $\dfrac{5 \times 3 + 1}{5} = \dfrac{\boxed{}}{5}$

(b) $2\frac{1}{3}$ ....

(c) $5\frac{1}{7}$ ....

GUIDED **2** Change each improper fraction into a mixed number.

(a) $\dfrac{11}{2}$ $11 \div 2 = 5$ remainder 1 so $\dfrac{11}{2} = 5\dfrac{\boxed{}}{2}$

(b) $\dfrac{11}{5}$ ....

(c) $\dfrac{41}{4}$ ....

GUIDED **3** Draw lines to match the equivalent fractions. One has been done for you.

$\dfrac{34}{3}$ $8\dfrac{4}{11}$

$\dfrac{26}{5}$ $9\dfrac{7}{8}$

$\dfrac{79}{8}$ $11\dfrac{1}{3}$

$\dfrac{92}{11}$ $5\dfrac{1}{5}$

4 For each pair of fractions, write down which is smaller.

(a) $\dfrac{10}{3}$ or $3\dfrac{1}{4}$ ....

(b) $\dfrac{6}{5}$ or $1\dfrac{2}{5}$?   ....

5 Tania thinks that $\dfrac{11}{9}$ is the same as $1\dfrac{1}{8}$.

Is she correct? Explain your reasoning.

....

....

....

Fractions of amounts

GUIDED **1** Find these fractions of amounts.

$\frac{3}{4}$ of 60 means $\frac{3}{4} \times 60$

(a) $\frac{3}{4}$ of 60 $\frac{3}{4} \times 60 = \frac{3 \times 60}{4} =$ ....

(b) $\frac{3}{8}$ of 160   ....

(c) $\frac{2}{3}$ of £96   ....

GUIDED **2** A factory employs 195 people and $\frac{3}{5}$ are men.

(a) How many men does the factory employ?

....

(b) How many women does the factory employ?

$\frac{2}{5} \times 195 =$ ....

3 An online company delivers 250 000 parcels a year. $\frac{1}{5}$ are delivered to Europe, $\frac{2}{5}$ are delivered to Asia and $\frac{1}{10}$ are delivered to the USA.

How many parcels are delivered to:

(a) Europe?   ....

(b) Asia?   ....

(c) the USA?   ....

4 Amy earns £2,100 each month and saves $\frac{2}{5}$ of this. Brian earns £1,800 and saves $\frac{4}{9}$ of this.

Who saves more money each month?

Don't just write down a name. Show your working and then write a conclusion.

....

....

....

5 Julie buys 120 flowers for £40. She sells one quarter of the flowers for £2 each, one third of the flowers for £3 each and the remaining flowers for £1 each.

Work out Julie's total profit.

....

....

....

Word problems with fractions

GUIDED 1 Yves shares a bag of 30 sweets with his friends. He gives Mandy $\frac{2}{5}$ of the sweets. He gives Sam $\frac{1}{10}$ of the sweets. He keeps the rest for himself.

How many sweets does Yves keep for himself?

Mandy gets $\frac{2}{5}$ × 30 = ...   Sam gets $\frac{1}{10}$ × 30 = ...

Yves keeps 30 – ....

2 Lewis wants to buy a new pair of trainers. There are two shops that sell the trainers he wants.

Sport4life	**Trainers Limited**
$\frac{2}{5}$ off the usual price of £65	$\frac{3}{10}$ off the usual price of £60

He wants to pay as little money as possible.

From which shop should he buy the trainers? Give your reasons.

....

....

3 Robert wants to buy some concrete posts. He finds two companies on the internet.

Cheap Posts	**Fence World**
£12 each	Buy 5 posts for £70 and
Buy 10 and receive $\frac{1}{6}$ off.	receive $\frac{1}{4}$ off.

Robert needs to buy 10 concrete posts.

Which shop should he buy from?

> Remember to show all your working and write a conclusion.

....

....

4 If Elaine uses her railcard to buy a ticket at the station she will get a third off the normal price. The normal price of the ticket at the station is £48. If she books a ticket online she can get one fifth off the normal price. The normal price of the ticket online is £45.

Elaine wants to pay the smallest amount of money possible. Should she use her railcard or book online?

....

....

Had a go ☐   Nearly there ☐   Nailed it! ☐

Decimals

1 In words, write the value of the given digit in each of these numbers.

   (a) 8 in 19.84   ....

   (b) 9 in 0.694   ....

   (c) 3 in 10.703   ....

GUIDED **2** Write the following numbers in order of size, starting with the smallest.

> Start with the lowest number.

   3.2   6.4   6.2   12.8   1.4

   1.4   ………..   ………..   ………..   ………..

3 Order the prices from smallest to largest.

   £15.40   £15.04   £15.05   £15.50

GUIDED **4** A scientist measured the lengths of some insects in centimetres. Order the lengths from smallest to largest.

   0.71   0.711   0.713   0.7   0.06

   0.06   ………..   ………..   ………..   ………..

5 A plumber weighed some copper in kilograms to take to the scrapyard. Order the weights from smallest to largest.

   10.83   10.8   10.825   10.779   10.88

   ....

6 For each pair of numbers, decide which number is larger.

   (a) 12.8 and 12.567   ....

   (b) 15.927 and 15.94   ....

   (c) 9.004 and 9.04   ....

Decimal calculations

GUIDED   **1**   It rained 3.58 cm on Monday and 1.89 cm on Tuesday.

Work out the total rainfall for Monday and Tuesday.

3.58 + 1.89 = ...

2   Aliya walks 1.48 miles to school and Bev walks 0.68 miles to school.

How much further does Aliya walk than Bev?

....

....

3   A swimmer swims the first half of a 100 m race in 33.82 seconds and the second half of the race in 36.79 seconds.

How long does it take him to swim the whole race?

....

....

GUIDED   **4**   Gemma buys some items from a gift shop.

She buys a box of chocolates costing £4.55 and two rolls of wrapping paper costing £1.35 each.

She gives the cashier a £10 note.

How much change should she receive?

4.55 + 1.35 + 1.35 = ...

....

5   Part of Aakash's receipt is missing. He gave the waiter £5 and received 57p change.

Aakash works out that the milk cost £2.48.

Is he correct? Explain your answer.

Scone	£0.85
Mug of tea	£1.59
Glass of milk	£

....

....

....