Entrance Exam Practice Book
Preparation in Year 4

PJW Education

Make sure the basics in English and Maths are known.

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Subtraction

1. 658
   -234

2. 973
   -561

3. 465
   -423

4. 653
   - 528

5. 617
   - 254

6. 133
   - 129

7. 432
   - 276

8. 925
   - 187

9. 836
   - 567

10. 3807
    - 1535

11. 8035
    - 6444

12. 4005
    - 2343

Ordering Numbers

When **Ordering numbers** it best to set the numbers underneath one another and compare each **place value column.**

Example: Order from greatest to least: 79, 790, 709, 7090, 7900

	Thousands	Hundreds	Tens	Units	
1st number			**7**	**9**	
2nd number		**7**	**9**	**0**	
3rd number		**7**	**0**	**9**	
4th number	**7**	**0**	**9**	**0**	
5th number	**7**	**9**	**0**	**0**	

Now we can **compare** starting with our **largest place value columns** on the left. Where two numbers have the same digit in a column, look across to the next until one is larger than the other. In this case we can see that the numbers from greatest to least should be…

7900, 7090, 790, 709, 79

Now try ordering these numbers from greatest to least using the same method.

1. 52, 502, 25, 520, 205 _____

2. 46, 406, 604, 64, 460 _____

3. 13, 301, 1030, 31, 310 _____

4. 78, 708, 780, 7, 8 _____

5. 40, 66, 646, 606, 466 _____

6. 910, 190, 91, 19, 901 _____

7. 38, 83, 803, 308, 380 _____

8. 120, 102, 112, 210, 201 _____

Answers

1. 52, 502, 25, 520, 205 = 520, 502, 205, 52, 25

2. 46, 406, 604, 64, 460 = 604, 460, 406, 64, 46

3. 13, 301, 1030, 31, 310 = 1030, 310, 301, 31, 13

4. 78, 708, 780, 7, 8 = 780, 708, 78, 8, 7

5. 40, 66, 646, 606, 466 = 646, 606, 466, 66, 44

6. 910, 190, 91, 19, 901 = 910, 901, 190, 91, 19

7. 38, 83, 803, 308, 380 = 803, 380, 308, 83, 38

8. 120, 102, 112, 210, 201 = 210, 201, 120, 112, 102

Simplifying Fractions

Look at the fraction below…

$\frac{4}{6}$ We can simplify or reduce this fraction to show it in its lowest terms or simplest form. First we must find the factors for each digit.

$\frac{4}{6}$ = 1, 2, 4 / = 1, 2, 3, 6 Which number is a factor of each digit?

$\frac{4}{6}$ = 1, 2, 4 / = 1, 2, 3, 6 '2' is called a common factor as both 4 and 6 can be divided by it. If we do this, the fraction will be seen in its simplest form.

$\frac{4}{6}$ ÷ 2 = $\frac{2}{3}$ So our new simplified fraction is **$\frac{2}{3}$**

Using this knowledge, complete the table below.

Starting Fraction	Factors	Greatest Common Factor	Calculation	Simplified Fraction
$\frac{4}{6}$	1, 2, 4 1, 2, 3, 6	2 2	$\frac{4}{6}$ ÷ 2 = 2 6 ÷ 2 = 3	**$\frac{2}{3}$**
$\frac{3}{12}$				
$\frac{5}{15}$				
$\frac{6}{18}$				
$\frac{8}{16}$				
$\frac{4}{20}$				

Simplifying Fractions - Answers

Look at the fraction below…

$\frac{4}{6}$ We can simplify or reduce this fraction to show it in its lowest terms or simplest form. First we must find the factors for each digit.

$\frac{4}{6}$ = 1, 2, 4 / = 1, 2, 3, 6 Which number is a factor of each digit?

$\frac{4}{6}$ = 1, (2), 4 / = 1, (2), 3, 6 '2' is called a common factor as both 4 and 6 can be divided by it. If we do this, the fraction will be seen in its simplest form.

$\frac{4}{6} \div 2 = \frac{2}{3}$ So our new simplified fraction is **$\frac{2}{3}$**

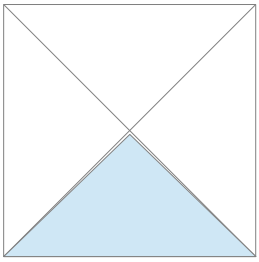
Using this knowledge, complete the table below.

Starting Fraction	Factors	Greatest Common Factor	Calculation	Simplified Fraction
$\frac{4}{6}$	1, 2, 4 1, 2, 3, 6	2 2	4 ÷ 2 = 2 6 ÷ 2 = 3	**$\frac{2}{3}$**
$\frac{3}{12}$	1, 3 1, 2, 3, 4, 6, 12	3 3	3 ÷ 3 = 1 12 ÷ 3 = 4	**$\frac{1}{4}$**
$\frac{5}{15}$	1, 5 1, 3, 5, 15	5 5	5 ÷ 5 = 1 15 ÷ 5 = 3	**$\frac{1}{3}$**
$\frac{6}{18}$	1, 2, 3, 6 1, 2, 3, 6, 9, 18	6 6	6 ÷ 6 = 1 18 ÷ 6 = 3	**$\frac{1}{3}$**
$\frac{8}{16}$	1, 2, 4, 8 1, 2, 4, 8, 16	8 8	8 ÷ 8 = 1 16 ÷ 8 = 2	**$\frac{1}{2}$**
$\frac{4}{20}$	1, 2, 4 1, 2, 4, 5, 10, 20	4 4	4 ÷ 4 = 1 20 ÷ 4 = 5	**$\frac{1}{5}$**

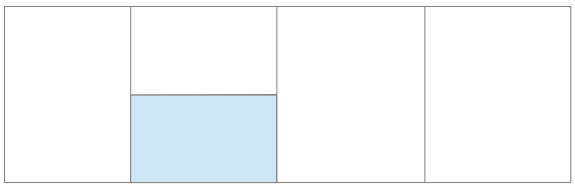
Finding Fractions 1

Look at each shape below and work out what fraction is shaded.

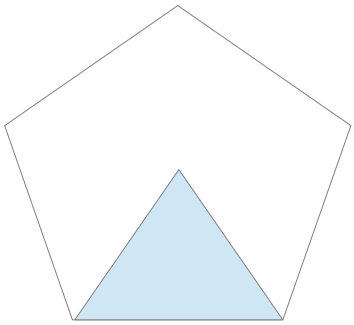
1.



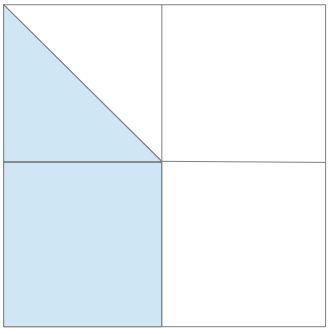
2.



3.



4.



Fractions of a Whole Number

Think about what happens when you find half of a number. Yes we divide it by 2. The **denominator** is 2. This gives us a clue as to how we can find other **fractions** of **whole numbers.** First divide the **whole number** by the **denominator** and then multiply the answer by the **numerator.**

Example: $\frac{2}{5}$ of 20

Step 1: 20 ÷ 5 = 4

Step 2: 4 x 2 = 8

So $\frac{2}{5}$ of 20 = 8

Complete the following table using the same method.

Fraction of Whole Number	***Calculation***	***New Number***
$\frac{1}{4}$ of 12	12 ÷ 4 = 3. 3 x 1 = 3	$\frac{1}{4}$ of 12 = 3
$\frac{2}{3}$ of 15		
$\frac{1}{2}$ of 6		
$\frac{1}{3}$ of 18		
$\frac{4}{5}$ of 15		
$\frac{2}{6}$ of 18		
$\frac{2}{7}$ of 21		
$\frac{3}{10}$ of 60		
$\frac{5}{8}$ of 40		
$\frac{3}{5}$ of 100		

Long Multiplication 4

There are various ways of calculating answers when multiplying numbers when both have 2 or more digits.

Example: 28 x 345

This method multiplies each part then adds the totals to get the final answer.

	3 4 5	
	x 2 8	First multiply 8 by 5,4 and 3; carry where necessary
=	2 7 6 0	Then put a 0 in the answer and multiply 2 by 5,4,3
=	6 9 0 0	Add the totals to get the final answer.
+	9 6 6 0	

Now try these using the same method.

1. 39 x 67 = _____

2. 76 x 54 = _____

3. 89 x 23 = _____

4. 77 x 45 = _____

5. 12 x 756 = _____

6. 64 x 837 = _____

7. 39 x 40 = _____

8. 51 x 15 = _____

9. 278 x 912 = _____

Long Multiplication 4 – ANSWERS

1. 39 x 67 = 2613

2. 76 x 54 = 4104

3. 89 x 23 = 2047

4. 77 x 45 = 3465

5. 12 x 756 = 9072

6. 64 x 837 = 53568

7. 39 x 40 = 1560

8. 51 x 15 = 765

9. 278 x 912 = 253536

Finding Change 1

When trying to find the amount of change from money, it is often easier to 'count up' to the larger amount rather than take away – especially when calculating mentally.

Example: Suki takes £1.00 to the shop and buys an item for 67p. How much change should she receive?

Start with the units. Add 3p to 7p to get to the next 10.
So 67p + 3p = 70p.

Then add onto the tens until we reach £1.00
So 70p + 30p = £1.00

Now add the 30p and 3p and our change is 33p.

Now try working out the change for these using the same method.

Find the change from £1.00 when spending…

1. 23p _____
2. 59p _____
3. 89p _____
4. 21p _____
5. 46p _____
6. 73p _____
7. 84p _____
8. 65p _____
9. 41p _____
10. 58p _____

Short Division 1

Learn these parts of a division problem. You'll need to know them!

	quotient
divisor	**dividend**

For this type of division we treat each **digit** individually. Start from the left and check whether the **divisor** can divide into the first digit of the **dividend.** Write your answer above the dividend and carry any remainder to the next digit. Then continue the process as before. If at any point it is **not possible** to divide a digit by the divisor, then write **0** in the answer and treat the undivided digit as a remainder.

Example 1:

	1	5	7
4	6	²2	²8

Now try to solve these problems, setting them out in the same way and using the same method.

1. 315 ÷ 7 = _____

2. 312 ÷ 4 = _____

3. 801 ÷ 9 = _____

4. 1272 ÷ 6 = _____

5. 432 ÷ 3 = _____

6. 914 ÷ 2 = _____

7. 2165 ÷ 5 = _____

8. 3794 ÷ 7 = _____

A Famous German Forest

Situated in the south-western corner of Germany is a famous region known commonly as the Black Forest. The area is a wooded mountain range bordered to the west and south by the Rhine Valley.

The name Black Forest was given to this place because when standing up on the mountain, in the wooded parts the trees can be very dense making it seem extremely dark. Indeed so dark are the woods in places that many strange stories and sinister tales have sprung from them. The Brothers Grimm were said to have been inspired by the same woods and even today some say that witches, werewolves, wizards and sorcerers all haunt the Black Forest.

The Black Forest has other reasons for being famous too. A sumptuous cake has been named after it, whilst the locals still don traditional dress at special times during the year. The cake includes several rich layers based upon the tasty cherry schnapps which represent the colours of the Black Forest region.

The trademark Bollenhut is a famous traditional hat with enormous pompoms. According to local lore, if a lady is wearing a hat with red pompoms she is unmarried. If she is wearing one with black pompoms she is married.

The Bollenhut itself is quite an elaborate piece of costume and is hand made by local milliners and seamstresses. It is increasingly rare to see it worn and there are fewer skilled workers who know how to create it.

In 1999, a massive storm hit the region and uprooted trees over hundreds of acres of the mountain tops. Some of the peaks remain bare today and other parts of the forest have been adversely affected by acid rain. Both these factors and the practice of logging have left the forest just a fraction of its original size. Despite this, it now claims tourism as one of its major industries, many of whom come to visit the Forest, its clock museums, see the traditional dress or taste its delicious honey and gateau.

The Black Forest marked in red on this map of Germany.

Part 1 – Answer the comprehension questions about the passage above.

Part 2 – Use the passage above to help answer the grammar questions.

Reading Comprehension

1. In which part of Germany is the Black Forest found?

a) west b) south c) north-west d) north-east e) south-west

2. The Black Forest got its name from...

a) a cake b) dark clouds c) dense trees d) black berries e) mountains

3. Which of the folllowing is not said to haunt the forest?

a) witches b) elves c) werewolves d) wizards e) sorcerors

4. In paragraph 3, another word for 'sumptuous' could be...

a) lavish b) enormous c) interesting d) delicate e) colourful

5. Why would a lady change the colour of pompoms on her hat?

a) it is fashionable b) for a festival c) she's a milliner

d) she's a seamstress e) she's just got married

6. What would you do with a Bollenhut?

a) wear it b) put it on a cake c) hide it in the forest

d) give it to a milliner e) give it to a seamstress

7. (Paragraph 3) 'locals still don traditional dress' means

a) tourists like dresses b) tourists buy dresses

c) local people sell dresses d) local people wear traditional clothing

8. (Paragraph 6) 'have left the forest just a fraction of its original size' means

a) the forest is larger now b) the forest is the same size now

c) the forest is smaller than it used to be d) the forest is old

9. Which of the following is now a major industry in the area?

a) clocks b) museums c) dress d) tourism e) honey

10. Which natural disaster destroyed much of the forest in the last century?

a) acid rain b) a storm c) logging d) flooding e) a fire

Grammar Practice

1. (Paragraph 1) ‘famous’ is what part of speech?

a) noun b) adjective c) preposition d) adverb e) pronoun

2. (Paragraph 2) Another word for dense could be

a) thick b) thin c) shadowy d) pale e) sparse

3. (Paragraph 2) ‘strange stories’ is an example of

a) personification b) onomatopoeia c) metaphor d) alliteration

e) onomatapoeia

4. (Paragraph 3) Another word for sumptuous could be

a) awful b) spiteful c) cheap d) distasteful e) lavish

5. (Paragraph 4) ‘local lore’ is an example of...

a) metaphor b) simile c) personification d) exclamation e) alliteration

6. (Paragraph 4) The opposite of ‘enormous’ is

a) gargantuan b) massive c) gigantic d) minute e) vast

7. (Paragraph 5) A milliner makes

a) dresses b) cakes c) hats d) clocks e) museums

8. (Paragraph 5) ‘Increasingly’ is what part of speech?

a) verb b) adverb c) adjective d) collective noun e) proper noun

9. (Paragraph 6) ‘uprooted’ is what verb tense?

a) simple past b) past continuous c) future d) simple present e) passive

10. (Paragraph 6) Another word for ‘gateau’ could be...

a) cake b) biscuit c) honey d) pizza e) schnapps

Proper Nouns

A proper noun tells us the specific name of a type of noun. They include names of people, towns, cities, countries, rivers, mountains, planets, days of the week, months of the year and names of products. They all begin with a capital letter no matter where in the sentence they appear.

Example: We visited York on Tuesday with our friends Sylvia and Bela.

In this sentence there are four proper nouns; York, Tuesday, Sylvia, and Bela. In the lesson below, underline all the proper nouns; there may be one, two, three, four or even five.

1. Jupiter, Neptune and Mars are all planets in our solar system.

2. Yesterday I ate a burger from MacDonalds.

3. The Nile is an extremely long river found in Africa.

4. Do you support Manchester United, Manchester City or Arsenal?

5. Friday is my favourite day of the week.

6. My favourite city is Christ Church in New Zealand.

7. In July we are going climbing in the Himalayas.

8. I am called Kelvin but my friends just call me Kelv.

9. My best friend drives a Mercedes Benz but I have a Ferrari.

10. Do you prefer to drink Pepsi or Coca Cola?

Now write two sentences of your own using the following proper nouns.

1. David, Hong Kong: _____

2. April, May: _____

Concrete Nouns

Common nouns are divided into two main groups: those that are concrete and those that are abstract. Concrete nouns are normally those you can touch or see or something which has a position in time or space.

Example: The cleaner wiped the window of the bus.

In this sentence there are three concrete nouns; cleaner, window, and bus. In the lesson below, underline all the concrete nouns; there may be one, two, three, four or even five.

1. Some helpful children picked up the litter from the ground.

2. We usually eat our lunch at the table.

3. I could only see one hippopotamus.

4. Did you remember to put a stamp on the letter to your mother?

5. Some cows stood in the field eating grass and looking at the birds.

6. My house has two doors, five windows, a chimney, and a gate.

7. Some fish swam in the river, looking for insects to eat.

8. I fell over in the playground and hurt my knee.

9. I forgot to sharpen my pencil.

10. Don't forget to read your book when you get to your house.

Now write three sentences of your own using the following concrete nouns.

1. scissors, card: _____

2. shoes, puddle: _____

3. elephant, water: _____

Abstract Nouns

Common nouns are divided into two main groups: those that are concrete and those that are abstract. Abstract nouns tend to describe qualities, states, or events/actions.

Example: There is still hope that he will tell the truth about the fight.

In this sentence there are three abstract nouns; hope (state), truth (quality), and fight (event). In the lesson below, underline all the abstract nouns; there may be one, two, or three.

1. It was with great sadness that we returned from our holiday.

2. He lowered his voice and spoke in a whisper.

3. We screamed with fear when we sensed a presence.

4. The scholars had great knowledge.

5. He shook his fist in anger at the injustice of the decision.

6. My beliefs are different to yours but we can still have a friendship.

7. Can you wait a while so I can tie my laces?

8. She has confidence in her ability.

9. The children described the event with real honesty.

10. I think it will be a lovely day.

Now write three sentences of your own using the following concrete nouns.

1. beauty: _____

2. idea: _____

3. reply: _____

Possessive Pronouns – Part 1

Possessive pronouns show ownership – something that belongs someone or something else. Some possessive pronouns modify the noun.

Example: The ball belongs to me. It is ***my*** ball.

Possessive pronouns which modify nouns are: ***my, your, his, her, its, our, their***

Notice how 'its' does not use an apostrophe when it is possessive!

Underline the possessive pronouns in the sentences below. There may be one or two in each sentence.

1. I took my brother to the cinema last night.

2. I like your new shoes.

3. Did you see that dog? Its paws were huge!

4. The owner drove his car to the garage for a service.

5. We love flying our kites on a windy day.

6. Your sister hurt her leg while playing football yesterday.

7. My bike is faster than your bike.

8. The captain of the pirate ship waved his hook menacingly at his crew.

9. The children ate their lunch in silence.

10. Please have your tickets ready for inspection.

Possessive Pronouns – Part 2

Possessive pronouns show ownership – something that belongs someone or something else. Some possessive pronouns replace the noun entirely.

Example: The ball belongs to me. It is ***mine***.

Possessive pronouns which modify nouns are: ***mine, yours, his, hers, its, ours, theirs.*** Apart from ***mine*** they all end with an 's'

Notice how 'its' does not use an apostrophe when it is possessive!

Underline the possessive pronouns in the sentences below.

1. That football is mine. Please give it back.

2. The lady said that the blue hat was hers.

3. When the teacher asked whose pencil it was, the boy said it was his.

4. We were worried about breaking the computer because it wasn't ours.

5. That coat isn't yours; it belongs to that man over there.

6. The children said the dog was theirs.

7. I know that book is his because it has his name on the front.

8. The coat used to be mine but then I gave it to my little brother.

9. The computer games are ours so please be careful with them.

10. Even if the game is theirs, they should still share it.

Articles

There are two types of articles: the definite and indefinite. ‘the’ is the definite article, ‘a’ or ‘an’ (used before a vowel sound) is the indefinite.

Example: John kicked the football and scored a goal.

In this sentence there are two articles; ‘the’ is the definite and ‘a’ is the indefinite. They are usually placed before a noun. In the sentences below under line the definite and indefinite articles. There may be more than one in each sentence.

1. The dog chewed on a bone.

2. The new restaurant in the town serves wonderful food.

3. Yesterday the rain was falling heavily.

4. White clouds are gathering over the city but not the countryside.

5. The squirrel climbed the tree holding a nut in its mouth.

6. The beautiful painting in the gold frame hung on a wall of the room.

7. Although New York is big, Washington is the capital city.

8. She used an onion to add flavour to the dish.

9. The children played on the swings, the slide and a roundabout.

10. The snowy white owl perched on a high branch of the tree.

Now write two sentences of your own using the following articles.

1. the: _____

2. a, an: _____

Verbs – The Simple Present Tense

Verbs are often thought of as action or doing words. The simple present tense tells us what someone does on a regular basis.

Example: John plays football after school.

In this sentence there is one verb; 'kicks' tells that John plays football after school. In the sentences below, underline all the simple present tense verbs; there may be one, two, or none in each sentence.

1. When it is time for dinner the dog chews on a bone.

2. The new restaurant in town serves wonderful food.

3. Usually when the rain falls heavily later the sun comes out.

4. White clouds are gathering over London but not Manchester.

5. The squirrel climbs the tree while holding some nuts in its mouth.

6. The painting was framed in gold and hangs on the wall.

7. Although New York is big, Washington is the capital city.

8. I love chocolate!

9. The children play on the swings and jump on the slide.

10. The owl perches high and watches its prey before it attacks!

Now write three sentences of your own using the following verbs.

1. walks: _____

2. sees, takes: _____

3. watches: _____

Verbs – The Simple Past Tense

Verbs are often thought of as action or doing words. The Simple Past Tense tells us of an action which has been completed.

Example: John kicked the football.

In this sentence there is one verb; 'kicked' tells what John did to the football and that he has completed this action. It is now in the past. In the sentences below, underline all the simple past tense verbs; there may be one, two, or even none in each sentence.

1. The dog chewed on a bone.

2. The new restaurant in town serves wonderful food.

3. Yesterday the rain fell heavily then the sun came out.

4. White clouds gathered over London but not Manchester.

5. The squirrel climbed the tree while holding some nuts in its mouth.

6. The painting was framed and hung on the wall.

7. Although New York was big, Washington is the capital city.

8. I ate the cake but I ignored the pizza!

9. The children swung on the swings and jumped on the slide.

10. The owl watched its prey before it attacked!

Now write three sentences of your own using the following verbs.

1. worked: _____

2. wrote, sent: _____