



BROAD HORIZON
—TUITION CENTRE—

11+ Tuition – Year 5

Week 23

ANSWERS

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Starter Task

1. Calculate the following percentages of numbers.

a. 85% of 500 =

425

b. 15% of 330 =

49.5

c. 40% of 650 =

260

d. 37% of 96 =

35.52

2. Convert the following percentages into fractions (**Simplify**)

a. 95% =

19/20

b. 36% =

9/25

c. 42% =

21/50

d. 24% =

6/25

3. Convert the following fractions into percentages.

a. $\frac{27}{90}$ =

30%

b. $\frac{36}{60}$ =

60%

c. $\frac{42}{70}$ =

60%

4. Divide £400 in the ratio of 7:8:5

140:160:100

(1 mark)

5. Divide 300 sweets in the ratio of 5:6:4

100:120:80

(1 mark)

6. Calculate the fractions of the following:

- a. Calculate $\frac{2}{5}$ of 350

140

- b. Calculate $\frac{5}{8}$ of 160

100

(2 mark)

15

Starter task – Vocabulary Homework Test

Exercise C

1. vain
2. rupture
3. taciturn
4. diligence
5. conscientious
6. aptitude
7. potter
8. manifest
9. choreograph
10. heist

Comprehension Practice

Test 9 - The Happy Prince, pages 65-70

Question	Answer	Explanation
1	B	Knowledge of vocabulary required. Sapphires are precious stones, usually of a bright blue colour. Therefore, the best option is B: jewels.
2	A	Reader’s personal judgement required. Refer to lines 4-6: “He is as beautiful as a weathercock,” remarked one of the Town Councillors who wished to gain a reputation for having artistic tastes.’
3	E	Knowledge of vocabulary required. A weathercock is a revolving metal pointer indicating the direction of the wind.
4	A	Reader’s logical inference required. Refer to lines 8-10 to help make a decision as to why the mother wants her son to be more like the Happy Prince specifically. She says: “Why can’t you be like the Happy Prince?” ... “The Happy Prince never dreams of crying for anything.” It can be inferred that she wishes her child to be happier, like the statue.
5	D	Refer to line 14: ‘...in their bright scarlet cloaks...’
6	C	Refer to lines 19-20: ‘he had stayed behind, for he was in love with the most beautiful Reed.’ A reed is a plant which grows in or nearby water.
7	D	Refer to lines 27-28: “It is a ridiculous attachment,” twittered the other Swallows; “she has no money, and far too many relations.”
8	A	Knowledge of vocabulary required. ‘Landed’ means to come down from the air and rest on a surface, and ‘alighted’ means to descend from the air and land. Therefore, the best option is A: landed.
9	B	Knowledge of vocabulary required. ‘Curious’ in the context of the passage means strange, unusual or odd, rather than inquisitive or nosy. Therefore, the best option is B: strange.
10	E	Reader’s logical inference required. Refer to lines 46-47 ‘The climate in the north of Europe...’ to help make a decision as to where this story is most likely set. The only country in the list of answer options which is in the north of Europe is Germany.
11	E	Reader’s personal judgement required. Refer to lines 62-65: “Round the garden ran a very lofty wall, but I never cared to ask what lay beyond it, everything about me was so beautiful. My courtiers called me the Happy Prince, and happy indeed I was, if pleasure be happiness.”
12	B	Refer to line 69: ‘...a low musical voice...’
13	C	Refer to line 72: ‘...she is a seamstress.’
14	E	Reader’s personal judgement required. Refer to lines 56-58: “So I lived, and so I died. And now that I am dead they have set me up here so high that I can see all the ugliness and all the misery of my city, and though my heart is made of lead yet I cannot choose but weep.” The implication is that the Prince feels guilty about being unaware of other people’s suffering before and now wants to make up for this indifference.
15	C	Refer to line 77: ‘My feet are fastened to this pedestal and I cannot move.’

Verbal Reasoning

Verbal Reasoning Tests

Paper 8

- | | |
|---------------------|-----------------------------|
| 1 snow, frost | 13 whisper |
| 2 hero, timid | 14 price |
| 3 water, sieve | 15 break |
| 4 consist, constant | 16 RIM |
| 5 globe, footstep | 17 RAY |
| 6 famous, noted | 18 HIT |
| 7 puff, blow | 19 RIP |
| 8 jealousy, envy | 20 PAN |
| 9 count, matter | 21 oppose, favour |
| 10 teach, guide | 22 feeble, strong |
| 11 object | 23 entire, partial |
| 12 fire | 24 invade, evacuate |
| | 25 failure, success |
| | 26 at |
| | 27 ne |
| | 28 er |
| | 29 am |
| | 30 ic |
| | 31 ly |
| | 32 sk |
| | 33 pleasure |
| | 34 forcefully |
| | 35 conform |
| | 36 stirring |
| | 37 inspire |
| | 38 suits, colour |
| | 39 with, an |
| | 40 on, collect |
| | 41 this, a |
| | 42 had, quite |
| | 43 queen |
| | 44 later |
| | 45 true |
| | 46 low |
| | 47 liquid |
| | 48 bold |
| | 49 glum |
| | 50 worn |
| | 51 main |
| | 52 gasp |
| | 53 rein |
| | 54 tile |
| | 55 treat |
| | 56 sore |
| | 57 vanish |
| | 58 leaves, yellow, Autumn |
| | 59 up, will, appointment |
| | 60 already, chosen, present |
| | 61 bring, in, night |
| | 62 feet, sofa, mud |
| | 63 AIR |
| | 64 POST |
| | 65 EAR |
| | 66 ARM |
| | 67 OVER |
| | 68 tan |
| | 69 ale |
| | 70 mash |
| | 71 frown |
| | 72 rise |

73-74

	F		C		M
A	L	K	A	N	E
	U		R		D
D	R	A	P	E	D
	R		E		L
M	Y	R	T	L	E

75-76

H	O	L	L	O	W
O		A		U	
A	D	M	I	T	S
R		E		C	
D	I	N	E	R	S
S		T		Y	

- 77 SAND
- 78 DISH
- 79 MOUSE
- 80 SEAL
- 81 TRAM
- 82 A piano is a musical instrument.
- 83 Food is eaten at breakfast.
- 84 Summer is one of four seasons.
- 85 Water falls from the sky.
- 86 Rosie
- 87 Poppy
- 88 Gertie
- 89 Charlie
- 90 biscuits
- 91 GO, MI
- 92 HI, SR
- 93 GT, HS
- 94 TI
- 95 BY, FU
- 96 HKNO
- 97 FKPPGT
- 98 UJQGU
- 99 VCDNG
- 100 RCRGT

Paper 9

- 1 business, company
- 2 ignore, disregard
- 3 piano, guitar
- 4 clear, distinct
- 5 chair, stool
- 6 leave, rise
- 7 small, hard
- 8 just, devoted
- 9 rich, strange
- 10 bird, queen
- 11 y
- 12 r
- 13 l
- 14 n
- 15 k
- 16 w

- 17 RIG
- 18 ACT
- 19 ROB
- 20 TAG
- 21 PIN
- 22 everyone
- 23 nowhere
- 24 warrant
- 25 legend
- 26 contract
- 27 reasonable
- 28 SHELF
- 29 DIET
- 30 WOLF
- 31 REAL
- 32 DEAL
- 33 bell
- 34 rope
- 35 read
- 36 drip
- 37 tack
- 38 returns, about, eat
- 39 pupils, absent, illness
- 40 boat, harbour, sea
- 41 hot, give, drink
- 42 think, right, job
- 43 grasshopper, net
- 44 trepidation, concern
- 45 include, allow
- 46 words, address
- 47 wanting, respectful
- 48 head, first
- 49 bet, again
- 50 cub, learn
- 51 lash, feast
- 52 tint, paint
- 53 words, dictionary
- 54 that, both
- 55 go, remember
- 56 the, that
- 57 not, if
- 58 progress, advance
- 59 graze, scrape
- 60 separate, detach
- 61 bank, deposit
- 62 chief, main
- 63 BOLT
- 64 TIER
- 65 SYRUP
- 66 TOSS
- 67 BAGGY
- 68 SEAT

69-70

	P		A		C
Q	U	I	V	E	R
	D		E		U
A	D	O	R	N	S
	L		S		T
C	E	L	E	R	Y

71-72

S	H	O	U	L	D
A		Y		A	
I	N	S	A	N	E
N		T		D	
T	H	E	M	E	S
S		R		D	

- 73 D
- 74 E
- 75 1
- 76 E
- 77 MC
- 78 RL
- 79 QD
- 80 UB
- 81 43
- 82 10
- 83 70
- 84 31
- 85 33
- 86 Roses grow in soil.
- 87 Biscuits are eaten.
- 88 Computers are designed by people.
- 89 Some animals are small.
- 90 Wine is made from fruit.
- 91 SODWH
- 92 FKLOG
- 93 ERRN
- 94 GHVN
- 95 20
- 96 21
- 97 12
- 98 18
- 99 22
- 100 20

Unnecessary Word – Shuffled Sentences

Test 2

Test 2 Unnecessary Word

- Q1 C rain**
 Correct sentence: *The sun was shining and there was not a single cloud in the sky. OR There was not a single cloud in the sky and the sun was shining.*
- Q2 A weather**
 Correct sentence: *You must decide whether you want to accept the job or not.*
- Q3 B got**
 Correct sentence: *Dinosaurs roamed through this land millions of years ago.*
- Q4 C of**
 Correct sentence: *The teacher eventually ran out of patience with the unruly student.*
- Q5 A meat**
 Correct sentence: *Some dogs like to swim whilst others detest getting wet. OR Some dogs detest getting wet whilst others like to swim.*
- Q6 E trains**
 Correct sentence: *The passenger was overcome by a sudden coughing fit.*

Test 19 Unnecessary Word

- Q1 C sheep**
 Correct sentence: *The herd of cows slowly wandered across the lush meadow.*
- Q2 B in**
 Correct sentence: *The house had been abandoned and was in a terrible condition.*
- Q3 C confuse**
 Correct sentence: *The purpose of school is to educate students.*
- Q4 E toes**
 Correct sentence: *Giraffes use their long necks to reach plants in tall trees.*
- Q5 D graze**
 Correct sentence: *Less than half of the attendees enjoyed the event.*
- Q6 E warm**
 Correct sentence: *The police refused to enter the ghetto as it was too dangerous.*

Test 36 Unnecessary Word

- Q1 B most**
 Correct sentence: *Most of the soldiers decided to return home after the battle. OR After the battle most of the soldiers decided to return home.*
- Q2 A cloth**
 Correct sentence: *The children were always very smartly dressed.*
- Q3 B to**
 Correct sentence: *The firefighters arrived at the scene but it was too late.*
- Q4 E costumes**
 Correct sentence: *Theatre actors tend to enjoy being in the limelight.*
- Q5 D apologise**
 Correct sentence: *My grovelling apology helped to resolve the disagreement.*
- Q6 B blame**
 Correct sentence: *Bakers start work early in the morning and finish around lunchtime.*

Test 4 Odd One Out

- Q1 D sheep**
 The other three are types of young animal.
- Q2 C average**
 The other three are synonyms.
- Q3 D hide**
 The other three are synonyms.
- Q4 B yank**
 The other three involve a movement of pushing away.
- Q5 D tomato**
 The other three grow underground.
- Q6 C weep**
 The other three are synonyms.
- Q7 B wheel**
 The other three are people controlling a vehicle.
- Q8 C opaque**
 The other three are synonyms.
- Q9 A dissent**
 The other three are synonyms.
- Q10 C eloquent**
 The other three are verbs.

Test 21

Test 21 Odd One Out

- Q1 C ant**
The other three are types of bird.
- Q2 B metre**
The other three are types of measurement.
- Q3 A orbit**
The other three are physical objects found in space.
- Q4 D fox**
The other three are verbs.
- Q5 C feast**
The other three are adjectives.
- Q6 B Denmark**
The other three are cities.
- Q7 C amateur**
The other three are professions.
- Q8 A bowl**
The other three are cutlery items.
- Q9 D determine**
The other three are synonyms.
- Q10 B accustom**
The other three are synonyms.

Test 38 Odd One Out

- Q1 C body**
The other three are internal organs.
- Q2 B attack**
The other three are synonyms.
- Q3 B window**
The other three are types of accommodation.
- Q4 C maternal**
The other three are colours.
- Q5 D garden**
The other three are words to describe vast expanses of land.
- Q6 B seal**
The other three are types of fish.
- Q7 A November**
The other three are months with 31 days.
- Q8 C lemonade**
The other three are hot drinks.
- Q9 A ignore**
The other three are synonyms.
- Q10 D tabby**
The other three are dog breeds.

Maths Practice Questions

Angles – Test 4

Test 4: Angles

- Q1 D**
 Triangle ABC is isosceles.
 Angle $B = 180^\circ - 112^\circ = 68^\circ$
 $y = 180^\circ - 68^\circ - 68^\circ = 44^\circ$
- Q2 B**
 Sum of interior angles of a scalene triangle = 180°
 Sum of interior angles of a quadrilateral
 $\frac{3}{3}$
 $= 360^\circ + 3 = 120^\circ$
 An exterior angle of an equilateral triangle
 $\times 1.5 = 120^\circ \times 1.5 = 180^\circ$
 Angles on a straight line = 180°
 Sum of interior angles of a triangle = 180°
- Q3 D**
 Internal angle of an equilateral triangle =
 $180^\circ \div 3 = 60^\circ$; $a = 360^\circ - 60^\circ = 300^\circ$
- Q4 A**
 $q = 180^\circ - 65^\circ - 52^\circ = 63^\circ$
- Q5 D**
 k is one angle in an isosceles triangle.
 Size of each of the other angles in this
 isosceles triangle = $180^\circ - \text{interior angle of a}$
 regular pentagon = $180^\circ - 108^\circ = 72^\circ$
 $k = 180^\circ - 72^\circ - 72^\circ = 36^\circ$
- Q6 B**
 90° right from east is south.
 90° right from south is west.
- Q7 E**
 Turning east to southwest in a clockwise
 direction is equivalent to 1.5 right-angled
 turns; $1.5 \times 90^\circ = 135^\circ$
- Q8 B**
 Size of angle between adjacent numbers on
 clock face = $360^\circ \div 12 = 30^\circ$
 Reflex angle between hands at 3:45 p.m. is
 equal to 6.75 times this angle.
 $30^\circ \times 6.75 = 202.5^\circ$
- Q9 A**
 Interior angle of a regular pentagon = 108°
 a is one angle in an isosceles triangle.
 $a = (180^\circ - 108^\circ) \div 2 = 36^\circ$

- Q10 C**
 a is equal in size to the angle adjacent to b .
 Therefore, $(a + b)$ = the interior angle of a
 regular pentagon.
 Alternative proof: b , b and $(108^\circ - 2a)$ are 3
 angles in a triangle
 So $b = (180^\circ - (108^\circ - 2a)) \div 2 =$
 $(180^\circ - 108^\circ) \div 2 = 36^\circ$
 So $a + b = 36^\circ + 72^\circ = 108^\circ$ = interior angle
 of a regular pentagon

Test 5: Money

- Q1 122**
 $\pounds 300 + \pounds 2.45 = 122.448979\dots$
 So 122 is the greatest number of tiles possible.
- Q2 £192.80**
 Repair charges = $(\pounds 35.75 \times 2) + (\pounds 22.50 \times 2) +$
 $\pounds 13 + (3 \times \pounds 6.10) = \pounds 147.80$
 Labour costs = 1.5 hours $\times \pounds 30 = \pounds 45$
 Total cost = $\pounds 147.80 + \pounds 45 = \pounds 192.80$
- Q3 £20.50**
 Weekly earnings =
 $(25 \times \pounds 11.50) + (9 \times \pounds 13) = \pounds 404.50$
 Difference = $\pounds 425 - \pounds 404.50 = \pounds 20.50$
- Q4 £1.30**
 Cost of 1 litre = $\pounds 19 + 15 = \pounds 1.26666\dots$
 $\pounds 1.2666\dots$ rounded to nearest 10 p is $\pounds 1.30$
- Q5 Coffee**
 Total paid = $\pounds 10 - \pounds 4.55 = \pounds 5.45$
 3 colas + 2 teas + 1 coffee =
 $(3 \times \pounds 0.65) + (2 \times \pounds 1.10) + \pounds 1.30 = \pounds 5.45$
 So highest priced item is coffee.
- Q6 £1,300**
 Profit per pizza = $\pounds 4.75 - \pounds 1.50 = \pounds 3.25$
 Total profit = $4 \times 100 \times \pounds 3.25 = \pounds 1,300$
- Q7 £2.40**
 Cost of 24 plants at Greenhouse =
 $\pounds 5.10 \times 4 = \pounds 20.40$; cost of 24 plants at
 Growell = $\pounds 3.80 \times 6 = \pounds 22.80$
 Saving = $\pounds 22.80 - \pounds 20.40 = \pounds 2.40$
- Q8 £111.50**
 Cost with meter = $((365 \text{ days} \times 3 \text{ hours}) \times$
 $\pounds 0.30) + \pounds 100 = \pounds 428.50$
 Saving = $\pounds 540 - \pounds 428.50 = \pounds 111.50$
- Q9 £647.50**
 Cost with meter = $((365 \text{ days} \times 5 \text{ hours}) \times$
 $\pounds 0.30) + \pounds 100 = \pounds 647.50$
- Q10 25**
 Cost per dictionary = $\pounds 3 \times 1.15 = \pounds 3.45$
 Dictionaries sold = $\pounds 86.25 \div \pounds 3.45 = 25$

Non-Verbal Reasoning

Test 3

Practice Questions

1 B

2 E

Test

1 D

2 A

3 B

4 E

5 C

6 D

7 D

8 E

9 B

10 D

11 A

12 D

Quick Revision

Workout the volume of the shapes with the following dimensions

	Length	Width	Height	Volume
1)	5cm	7cm	0.2cm	7cm³
2)	13mm	4mm	0.5mm	26mm³

(2 marks)

Workout the following:

		Mode	Range	Average	Median
3)	4, 5, 4, 3	3	2	4	4
4)	2, 11, 7, 2	2	9	5.5	4.5
5)	5, 7, 5, 9, 7	5,7	4	6.6	7

(12 marks)

6) Round 27.995 to two decimal places

28.00

7) Round 38,762 to the nearest thousand

39,000

8) Add 75 minutes to 6:25pm

7:40 pm

9) Add 100 minutes to 11:30pm (give answer in 24 hour clock)

1:10 pm

Homework – Vocabulary to memorise

Vocabulary 3

Exercise A

1. supremacy
2. stability
3. provoke
4. decisive
5. wildfire
6. inventive
7. phenomenon
8. derive
9. perturb
10. sanctuary

Exercise B

1. phenomenon
2. perturb
3. provoke
4. wildfire
5. stability
6. sanctuary
7. supremacy
8. inventive
9. decisive
10. derive

Anagrams

Test 23

1. x Female foxes are called vixens.
2. e Your kitten is so lively.
3. h We should call the whole thing off.
4. y It is true that honesty is the best policy.
5. e He is an expert in his field.
6. r He ironed the sheets to get rid of the creases.
7. s He works in costume design.
8. d I chose a burgundy hoodie.
9. l You need to leave the building now.
10. t I was left with a bitter taste in my mouth.

Related Words

Test 23

1 eggs

Solution: The words in the top row of the grid are all collective nouns related to the objects directly below (e.g. a 'clutch' of 'eggs').

2 impeccable

Solution: The words in the top row of the grid are synonyms of the words directly below (e.g. 'flawless' and 'impeccable' are synonyms).

3 its

Solution: The words in the top row of the grid are all pronouns. The word directly below each pronoun is the corresponding possessive determiner ('its' is the possessive determiner that goes with 'it').

4 begin

Solution: The words in the top row of the grid are antonyms of the words directly below (e.g. 'begin' and 'cease' are antonyms).

5 guinea pig

Solution: The words in the bottom row of the grid are all primates going from largest to smallest. The creatures in the top row are all rodents, going from largest to smallest (a 'beaver' is bigger than a 'guinea pig', which is bigger than a 'hamster').

6 vow

Solution: The words in the top row of the grid rhyme with the words directly below (e.g. 'toe' with 'dough', 'cuff' with 'rough' and 'vow' with 'bough').

7 length

Solution: The words in the top row of the grid can be joined to the words directly below to form new words (e.g. 'wave' + 'length' = 'wavelength').

8 fast

Solution: The words in the top row of the grid are all adjectives that are synonyms of 'quick'. Directly below them are the equivalent adverbs ('fast' is both an adverb and an adjective when relating to speed).

9 clam

Solution: The words in each row are all closely related (e.g. 'clams', 'mussels' and 'cockles' are all types of shellfish).

10 go

Solution: The words in the top row are all verbs. They can be joined to the words directly below to make new words (e.g. 'go' + 'at' = 'goat')

Rhyming Synonyms

Test 23

1. **A** **dilapidated**
 sundown → rundown → dilapidated
2. **E** **esteemed**
 religious → prestigious → esteemed
3. **C** **opposition**
 resent → dissent → opposition
4. **D** **keep**
 detain → retain → keep
5. **E** **lacklustre**
 conundrum → humdrum → lacklustre
6. **A** **modest**
 bumble → humble → modest
7. **C** **over-confident**
 trash → brash → over-confident
8. **E** **pungent**
 wrong → strong → pungent
9. **A** **brave**
 indebted → intrepid → brave
10. **E** **distinguished**
 tenement → eminent → distinguished