



**BROAD HORIZON**  
— T U I T I O N —

# **11+ Tuition**

**Year 5 - Online**

**Week 6**

**ANSWERS**

## Starter Task – Quick Revision

1) Work out the difference in time between 2:37am and 7:02am.

**4 Hours 25 Minutes**

2) Work out the difference in time between 8:45pm and 1:25am.

**4 Hours 40 Minutes**

3) Work out the difference in time between 11:25pm and 3:15am.

**3 Hours 50 Minutes**

**(3 marks)**

Now work out the Mean, Mode, Median and Range of the numbers in bold on the left-hand side. You will get 1 mark for each individual calculation.

		Mode	Range	Mean	Median
4)	<b>3, 4, 2, 3</b>	3	2	3	3

**(4 marks)**

5)  $8.23 \div 1000 =$

**0.00823**

6)  $(18 - 2 \times 3)^2 - 6^2 + 2^3 =$

**116**

## Starter Task – Quick Revision

1) Add 75 minutes to 12:45pm.

**2:00pm**

2) What is the average of these times, 23.2 seconds, 30 seconds and 10.7 seconds?

**21.3**

3) Workout the difference between 67 minutes 37 seconds and 95 minutes 13 seconds.

**27 Minutes and 36 Seconds**

4)  $85 - 158 =$

**-73**

5)  $8 - 12 =$

**-4**

6)  $11 - 15 =$

**-4**

7)  $23 - 32 =$

**-9**

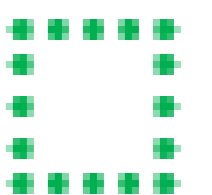
8)  $8.27 \div 10,000 =$

**0.000827**

9) Convert 2130g to Kg

**2.13kg**

10) Convert 3.7L to ml



# Answer Sheet: Key Stage 2 Maths Practice Reasoning: Solve Problems Converting Between Units of Time



question	answer	notes
1	43 minutes	Allow 42 - 44.
2	3 years 8 months	
3	3 minutes 20 seconds	
4	24 minutes	
5	6 hours 35 minutes	
6	25 days	do not count Oct 23 <sup>rd</sup>
7	16 minutes and 29 seconds	
8	13:07 or 1:07	
9	17:37 or 5:37	
10	1942	
11	4.49pm or 16:49	
12	53 seconds	
13	7 hours 37 minutes	
14	16 minutes	

# Continue the Number Patterns *Answers*

Continue each pattern and write down what the rule is. The first one has been done for you!

## Whole Number Patterns:

1. 20, 42, 64, 86, 108,  $\boxed{130}$ ,  $\boxed{152}$ ,  $\boxed{174}$

Rule = **the pattern is add 22**

2. 109, 124,  $\boxed{139}$ , 154, 169,  $\boxed{184}$ ,  $\boxed{199}$

Rule = **the pattern is add 15**

3. 120, 108,  $\boxed{96}$ ,  $\boxed{84}$ , 72, 60,  $\boxed{48}$ ,  $\boxed{36}$

Rule = **the pattern is subtract 12**

## Decimal Number Patterns:

4. 0.010, 0.015, 0.020,  $\boxed{0.025}$ , 0.030,  $\boxed{0.035}$ ,  $\boxed{0.040}$

Rule = **the pattern is add 0.005**

5. 1.5, 1.7, 1.9,  $\boxed{2.1}$ ,  $\boxed{2.3}$ , 2.5,  $\boxed{2.7}$

Rule = **the pattern is add 0.2**

## Fraction Number Patterns:

6.  $\diamond$ , 1,  $1\diamond$ ,  $\boxed{2}$ ,  $\boxed{2\frac{1}{2}}$ , 3,  $\boxed{3\frac{1}{2}}$ , 4,  $4\diamond$ ,  $\boxed{5}$

Rule = **the pattern is add  $\frac{1}{2}$  (one half)**

7. 5,  $4\frac{3}{4}$ ,  $4\frac{2}{4}$ ,  $\boxed{4\frac{1}{4}}$ , 4,  $\boxed{3\frac{3}{4}}$ ,  $\boxed{3\frac{2}{4}}$

Rule = **the pattern is subtract  $\frac{1}{4}$  (one quarter)**

# Negative Numbers and Temperature Answers

1.

- a.  $-8^{\circ}\text{C}$ ,  $-6^{\circ}\text{C}$ ,  $-4^{\circ}\text{C}$ ,  $-1^{\circ}\text{C}$ ,  $2^{\circ}\text{C}$ ,
- b.  $-15^{\circ}\text{C}$ ,  $-11^{\circ}\text{C}$ ,  $6^{\circ}\text{C}$ ,  $10^{\circ}\text{C}$ ,  $14^{\circ}\text{C}$
- c.  $-25^{\circ}\text{C}$ ,  $-23^{\circ}\text{C}$ ,  $-13^{\circ}\text{C}$ ,  $12^{\circ}\text{C}$ ,  $16^{\circ}\text{C}$ ,  $18^{\circ}\text{C}$ ,  $20^{\circ}\text{C}$

2.

- a.  $-4^{\circ}\text{C}$
- b.  $-8^{\circ}\text{C}$
- c.  $-17^{\circ}\text{C}$
- d.  $-6^{\circ}\text{C}$

## Word Problems Involving Negative Numbers: Answers

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question	answer
1	15°C
2	-7
3	23
4	£11
5	-2
6	-7°C
7	-£35
8	£600

Question	Answer
1	$56 - (-89) = 145$ . The answer is $145^{\circ}\text{C}$
2	$\pounds 1750 - \pounds 1346 = \pounds 404$
3	$18 - (-28) = 46$ . The temperature is $46^{\circ}\text{C}$ .
4	$-\pounds 25 - \pounds 134 = -\pounds 159$ . $\pounds 159$ overdrawn.
5	$-31 - (-12) = -19$ . The temperature falls by $19^{\circ}\text{C}$ .
6	<p>Total bills: <math>\pounds 234.97 + \pounds 132.17 + \pounds 108.34 = \pounds 475.48</math></p> <p>Balance: <math>\pounds 456.75 - \pounds 475.48 = -\pounds 18.73</math>. The balance is <math>\pounds 18.73</math> overdrawn.</p>

Name: \_\_\_\_\_

## Answer key

### Greatest Common Factor

MS1

Find the greatest common factor for each pair of numbers.

1) 28,12

Factors of 28 - 1, 2, 4, 7, 14, 28

Factors of 12 - 1, 2, 3, 4, 6, 12

GCF(28, 12) - 4

2) 90,30

Factors of 90 - 1, 2, 3, 5, 6, 9, 10, 15, 18, 30, 45, 90

Factors of 30 - 1, 2, 3, 5, 6, 10, 15, 30

GCF(90, 30) - 30

3) 36,54

Factors of 36 - 1, 2, 3, 4, 6, 9, 12, 18, 36

Factors of 54 - 1, 2, 3, 6, 9, 18, 27, 54

GCF(36, 54) - 18

4) 26,52

Factors of 26 - 1, 2, 13, 26

Factors of 52 - 1, 2, 4, 13, 26, 52

GCF(26, 52) - 26

5) 21,27

Factors of 21 - 1, 3, 7, 21

Factors of 27 - 1, 3, 9, 27

GCF(21, 27) - 3

## Finding Common Multiples: Answers

question	answer
<b>A.</b>	
1	Multiples of 3: <b>3, 6, 9, 12</b> Multiples of 4: <b>4, 8, 12</b> LCM of 3 and 4 = <b>12</b>
2	Multiples of 3: <b>3, 6, 9, 12, 15, 18, 21, 24, 27</b> Multiples of 9: <b>9, 18, 27</b> LCM of 3 and 9 = <b>9</b>
3	Multiples of 2: <b>2, 4, 6, 8, 10, 12, 14, 16, 18, 20</b> Multiples of 5: <b>5, 10, 15, 20, 25</b> LCM of 2 and 5 = <b>10</b>
4	Multiples of 8: <b>8, 16, 24, 32, 40, 48, 56, 64</b> Multiples of 4: <b>4, 8, 12, 16, 20, 24, 28, 32</b> LCM of 8 and 4 = <b>8</b>
5	Multiples of 6: <b>6, 12, 18, 24, 30, 36, 42, 48, 54</b> Multiples of 9: <b>9, 18, 27, 36, 45, 54, 63, 72, 81</b> LCM of 6 and 9 = <b>18</b>
6	Multiples of 10: <b>10, 20, 30, 40, 50, 60, 70, 80</b> Multiples of 5: <b>5, 10, 15, 20, 25, 30, 35, 40</b> LCM of 10 and 5 = <b>10</b>
7	Multiples of 11: <b>11, 22, 33, 44, 55, 66, 77, 88</b> Multiples of 6: <b>6, 12, 18, 24, 30, 36, 42, 48, 54, 60, 66</b> LCM of 11 and 6 = <b>66</b>
8	Multiples of 7: <b>7, 14, 21, 28, 35, 42, 49, 56, 63, 70, 77, 84, 91</b> Multiples of 13: <b>13, 26, 39, 52, 65, 78, 91</b> LCM of 7 and 13 = <b>91</b>
9	Multiples of 8: <b>8, 16, 24, 32, 40, 48</b> Multiples of 12: <b>12, 24, 36, 48, 60</b> LCM of 8 and 12 = <b>24</b>
10	Multiples of 25: <b>25, 50, 75, 100, 125, 150, 175, 200</b> Multiples of 40: <b>40, 80, 120, 160, 200</b> LCM of 25 and 40 = <b>200</b>

# **TYPE EIGHT:**

laze

cash

pets

sung

sat

stir

part

sat

won

name

art

dear

seat

strap

dank

calm

came

tube

cart

test

## **TYPE NINE:**

<b>ATE</b>	<b>SON</b>	<b>POD</b>
<b>WON</b>	<b>ADO</b>	<b>SET</b>
<b>LOW</b>	<b>EAR</b>	<b>TRY</b>
<b>SAT</b>	<b>AGE</b>	<b>WON</b>
<b>MAT</b>	<b>EGO</b>	<b>TEN</b>
<b>ACT</b>	<b>TOE</b>	<b>EYE</b>
<b>ONE</b>	<b>REV</b>	<b>EWE</b>
<b>PIT</b>	<b>ARE</b>	<b>RED</b>
<b>WIT</b>	<b>ONE</b>	<b>END</b>
<b>ATE</b>	<b>NOW</b>	<b>TEE</b>

## Test 8

1. he paused at the side of the road and checked it was safe to cross
2. deserts have fewer centimetres of rainfall than anywhere else
3. waves pounded the rocks during the terrible storm
4. ducks quacked loudly at the passing boat
5. the acrobat enthralled them with his tricks
6. windows are usually made of glass
7. running is a healthy way to get fit
8. she was tired after her long run
9. children were building sandcastles on the beach
10. mice were scuttling everywhere in the abandoned house

## Section 1 - Complete the Series

1. C

The triangle and the ellipse alternate in each series square.

2. C

The number of lines increases by one in each series square.

3. A

In each series square, the rocket rotates 45 degrees clockwise.

The colour of the circle alternates between black and white.

4. A

In each series square, the circle moves down and the black ellipse moves up.

5. C

In each series square, the black shading moves up one shape.

## Section 2 - Complete the Grid

1. A

Working from top to bottom, the black shading turns grey.

2. B

Working from left to right, the colour of the large triangles changes from black to grey and the

small inner triangle rotates 180 degrees.

3. B

Working from left to right, the line extends

along one more side of the grid square.

4. C

Working from left to right, the figure rotates

45 degrees clockwise in each grid square.

## Section 3 - Find the Figure

### Like the First Two

1. B

All figures must be black curved arrows.

2. B

In all figures, both arrowheads must

point towards the curved lines.

3. C

All figures must have a black rectangle. The two ends of

each semicircle must point towards the trapezium.

4. B

In all figures, the ribbons must be the same colour as

the circle. The white star must have six points.

5. D

All figures must have two small black circles inside the

large white shape and two white circles outside it.

## Section 4 - Look at the Figure

### from the Top

1. B

There should be five blocks visible from above,

which rules out options A, C and D.

2. A

There should be four blocks visible from above, which rules out

options B and C. There are two blocks next to each other at

the back on the right of the figure, which rules out option D.

3. D

There should be four blocks visible from above, which

rules out options A and B. There should be three blocks

at the back of the figure, which rules out

4. C

There should be four blocks visible from above, which rules out

options A and B. There should be a line of three blocks along

the back of the figure, which rules out option D.

## Section 5 - Odd One Out

1. D

All other figures are hatched horizontally

(D is hatched vertically)

2. D

All other figures have five white triangles.

3. B

If all the figures are rotated 50 the sheep is upright.

The sheep's head is on the left in all other figures.

4. A

In all other figures, the dashed line is

next to a white section of the circle.

5. D

If the figures are rotated 50 the curved line

coming out of the figure is at the bottom, the

line curves to the left in all other figures

## Section 6 - Reflect the Figure

1. D

Options A and B have the wrong shapes.

Option C has the wrong shading.

2. B

Option A has not been reflected and the black stripe is

on the wrong white rectangle. Option C is a 180 degree

rotation. Option D has the wrong shading.

3. A

Options B and C have the wrong shading.

Option D is the wrong shape.

4. D

Options A and B have the wrong number of

triangles. Option C has the wrong shading.

5. A

Option B is a 180 degree rotation.

Options C and D are the wrong shapes.

## Quick Lesson Recap

- 1) A book reading club starts at 19:30 and lasts 125 minutes, what time does it end?  
**21:35**
- 2) Charlie is looking forward to the school fair which is in 18 days. If today is 17<sup>th</sup> April, what date will the fair take place on?  
**5<sup>th</sup> May**
- 3) Three friends ran a 100m race, these were their race times; 15.2 seconds, 25.3 seconds and 35.1 seconds. What was the average/mean of their race times?  
**25.2**
- 4) Workout the difference between 29 minutes 17 seconds and 60 minutes 37 seconds.  
**31 Minutes 20 Seconds**
- 5) Explain **how** to subtract two numbers when the first number is smaller than the second number in the sum?  
**Flip the subtraction around and put a – in your answer**
- 6)  $17 - 37 =$   
**-20**
- 7)  $254 - 587 =$   
**-333**
- 8) If a supermarket carpark is on floor  $-4$  and you are on floor 3, how many floors must you descend before you reach the carpark?  
**7**
- 9) Which direction do you move the decimal point if you are dividing a decimal number by 1000?  
**Left**  
How many times will you move it?  
**3**  
What do you do if there are not enough spaces to move in that direction?  
**Fill it in with 0s**

## Quick Lesson Recap

1) How do you work out the HCF of two numbers?

2) Work out the HCF of the following:

a) 42 and 27

**3**

b) 24 and 36

**12**

3) What is the lowest common multiple of a set of numbers?

4) Work out the LCM of the following:

a) 6 and 8

**24**

b) 5 and 30

**5**

5)  $75 - 97 =$

**-22**

6)  $(24 + 27 \div 3)^{\square} - 6^2 + 3^3 =$

**24**