

St Andrew's Academy

Mathematics Department



COURSE 2 BLOCK 6

PRE-ASSESSMENT LEARNING EVALUATION





	Red Amber Green	Revision Exercise
NUMBER		
 I can multiply any number by a number which has two or more digits (long multiplication) e.g. a) 27 x 56 b) 19 x 523 	000	• Number Exercise 1
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		
350 + 42 1512 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1		
two or more digits (long division) e.g. a) $4046 \div 16$ b) 2191 $= 4046 \div 8 \div 2$ $= 508 \div 2$ = 254 4 876407436360440		• Number Exercise 2
 I understand and complete calculations in the necessary order. B O D M A S r f i U d U a v I d b c i t t k d i r e e P a t I c s Y t 		• Number Exercise 3





• I can apply the rules regarding order of Number Exercise 3 • operations to carry out calculations: e.g. a) $3 + 5 \times 2$ b) $17 - 12 \div 4$ = 3 + 10 = 17 - 3 = 13 = 14 d) (21 + 7) ÷ (6 – 2) c) 6 x (9 - 5) = 28 ÷ 4 = 7 = 6 x 4 = 24 e) $20 - \frac{1}{2}$ of 8 f) $3 \times 9 + 2^2 - 14$ = 20 - 4 = 27 + 4 - 14 = 16 = 31 – 14 = 17





		Red	Amber	Green		Revision Exercise
	ALGEBRA					
0	I can remove brackets from an expression: e.g. a) $6(2x + 3)$ b) $2d(3e - 5f)$ = $12x + 18$ = $6de - 10df$	\bigcirc	\bigcirc	\bigcirc	•	Algebra Exercise 1
	c) $-3(y-6)$ = $-3y + 18$					
0	I can remove brackets and simplify: e.g. a) $7(a + 2) - 9$ b) $5 - 2(x + 1)$ = $7a + 14 - 9$ = $5 - 2x - 2$ = $7a + 5$ = $3 - 2x$	\bigcirc	0	0	•	Algebra Exercise 2
	c) 4(3p + 4q) - 7q d) 2(x + 3) + 4(3x + 1)					
	$= 12p + 16q - 7q \qquad = 2x + 6 + 12x + 4$					
	= 12p + 9q = 14x + 10					
0	I can remove pairs of brackets and simplify: e.g. a) $(x + 3)(x - 2)$ $= x^2 - 2x + 3x - 6$ $= x^2 + x - 6$	\bigcirc	0	0	•	Algebra Exercise 3 Q1
	b) $(2y - 4)(3y - 1)$ = $6y^2 - 2y - 12y + 4$ = $6y^2 - 14y + 4$	0	\bigcirc	0	•	Algebra Exercise 3 Q2
	c) $(b + 9)^2$ = $(b + 9)(b + 9)$ = $b^2 + 9b + 9b + 81$ = $b^2 + 18b + 81$	0	0	0	•	Algebra Exercise 4
0	I am aware of the inequality symbols:			(
	< less than > greater than ≤ less than or equal to. ≥ greater than or equal to.	\bigcirc	\bigcirc	\bigcirc	•	Algebra Exercise 5
0	I can use in equality symbols to compare numbers e.g.					
	a) 5 > 2 b) -4 < 1 c) -3 > -6	\bigcirc	\bigcirc	\bigcirc	•	Algebra Exercise 5
	d) 2 + 3 > 4					

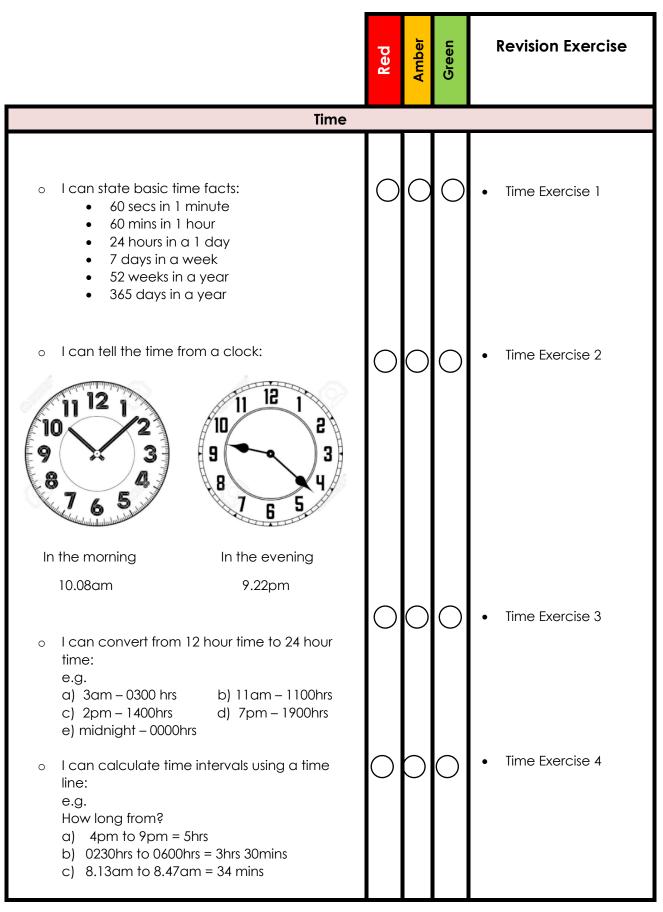




 I can solve inequati 	ons using the balance method,					
e.g.		()	()	()	•	Algebra Exercise 6
a) y — 3 < 5	b) 2x ≥ 8	\sim	\smile	\sim		
+ 3 + 3	÷2 ÷2					
y <8	x ≥ 4					
,						
c) 7b−3 > 18						
+ 3 + 3						
7b > 21						
÷7 ÷7						
b > 3						
		-				

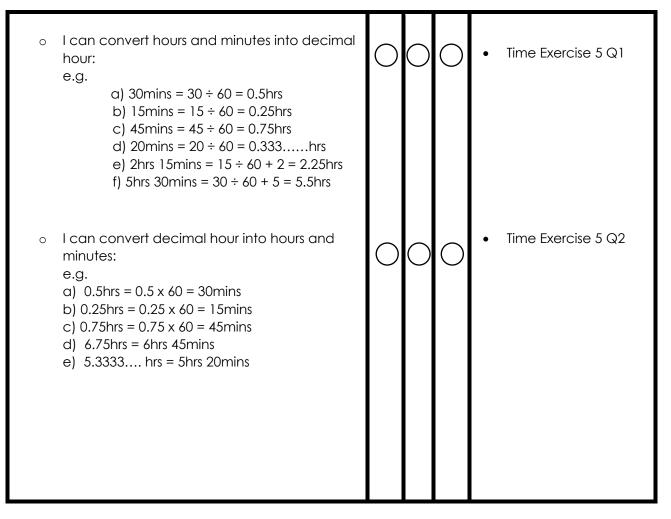














COURSE 2 BLOCK 6 Revision Exercises



NUMBER REVISION

Exercise 1

Complete the following calculations:
 a) 23 x 15
 b) 56 x 34
 c) 12 x 57

a) 23 x 15	b) 56 x 34	c) 12 x 57	d) 87 x 32
e) 73 x 42	f) 21 x 85	g) 44 x 39	h) 123 x 19
i) 764 x 27	j) 208 x 14	k) 735 x 31	l) 914 x 58
m) 413 x 251	n) 126 x 352	o) 514 x 178	p) 1584 x 49

2. A Ferris wheel completes a rotation in 53 seconds. How many seconds in all would it take to complete 13 rotations?

3. A small dairy farm produces 87 gallons of milk in a day. How many gallons of milk will it produce in 15 days?

4. The auditorium at Lion's school has 28 rows in all. If each row consists of 95 seats, calculate the total capacity of the auditorium?

5. Clara and her friends take an average of 13 hours to mow a community lawn over a weekend. How many hours on an average will they take to mow 14 such lawns?

6. It takes an hour for a car manufacturing company to assemble 11 cars. How many cars can the company assemble in 56 hours?

Exercise 2

1. Complete the following calculations:

a) 312÷12	b) 984÷24	c) 448÷16	d) 714÷21
e) 918÷18	f) 2241 ÷ 27	g) 4416÷48	h) 3300÷25
i) 5427 ÷ 81	j) 17784 ÷ 72	k) 22104÷36	l) 23240 ÷ 56

2. Simon travelled a distance of 608 miles from Pittsburgh, PA to Birmingham, Alabama to visit his family on Easter. If the car used up19 gallons of fuel in all for the trip, calculate the average miles covered per gallon.

3. Kris bought a pack of 150 glossy photo papers. If the pack costs \$30, how much does each photo paper cost?

4. A total of 108 students participated in the spring ballet recital at Dawn High. If 12 students were part of each ballet performance, how many ballet recitals took place in all?

5. Michelle baked 264 swiss rolls which were to be delivered for a party. If she plans to pack 24 in a box, how many boxes in all will she require to pack all the swiss rolls?

6. A warehouse receives 380 wooden boxes for storage. If 95 slots are available to store the boxes, how many wooden boxes will be stacked in each slot?

Exercise 3

1.	Complete the follo	owing calculations:		
	a) 5 x 2 + 3	b) 3 + 2 x 5	c) 20-6x2	d) (20 – 6) x 2
	e) 24 ÷ 4 + 6	f) 24 ÷ (5 + 3)	g) 8 x 4 - 3 x 5	h) 6 + 4 x 3 ²
	i) 36 ÷ (4 + 2) – 3	j) (6 + 5) x 3 x 4 ²	k) $\frac{8+4}{1+5}$	$\left \right) \frac{9 \times 4}{6^2}$
	m) (-4) ²	n) $\frac{5-6\times 3}{1+24\div 2}$		

ALGEBRA REVISION

Exercise 1

1.	Remove the brac	kets:		
	a) 5(x + 3)	b) 2(y-6)	c) 6(4b + 2)	d) x(x-4)
	e) 9a(2b + a)	f) -3(p + 5)	g) -7(2w - 4)	h) 5y(6y + 3z)

1.	Remove the brackets	and simplify:	
	a) 3(x + 5) – 12	b) 6(2y - 4) + 5y	c) d(3e + 2f) – de
	d) 5 + 8(2x + 1)	e) 3-2(y+5)	f) 12-3(4a-2)
	g) 2x + 3(x - 4y)	h) $5(x + 2) + 2(x - 1)$	i) 3(4p-5) + 2(p + 8)
	j) $6(2w + 1) - 3(w - 7)$		

1. Remove the bracke	ts and simplify:	
a) (w + 4)(w + 2)	b) (y + 1)(y + 2)	c) (c + 2)(c +5)
d) (a + 5)(a - 3)	e) (g + 7)(g - 4)	f) (s – 3)(s + 5)
g) (p – 3)(p – 2)	h) (y - 4)(y - 4)	i) (k – 5)(k – 6)

2.	Remove the brackets o	and simplify:	
	a) (2c + 1)(c + 2)	b) (x + 1)(2x + 5)	c) (2n + 2)(n + 5)
	d) (p + 2)(2p - 1)	e) (5g-4)(g+1)	f) (a – 3)(4a + 7)
	g) (2y - 3)(y - 1)	h) (5k – 2)(k – 3)	i) (z – 7)(6z – 5)
	j) (2c + 1)(2c + 3)	k) (5x + 1)(2x + 5)	l) (3 + 2n)(2n + 5)
	m) (3p + 2)(2p – 1)	n) (5g – 4)(1 + 2g)	o) (2a - 3)(4a + 7)
	p) (2y-3)(9y-1)	q) (5k – 4)(2k – 1)	r) (2z – 9)(6z – 5)

Exercise 4

1. Remove the brackets and simplify:					
a) (x + 6) ²	b) (y + 3) ²	c) (c + 5) ²			
d) (p - 3) ²	e) (x - 7) ²	f) (a - 4) ²			
g) (2b + 1) ²	h) (3w + 4) ²	i) (8 + 5g) ²			
j) (4f - 2) ²	k) (7x - 9) ²	l) (6 – 2y) ²			

Exercise 5

Write < (less than) or > (greater than) in the blanks below to make each statement true:

1) -95	2) -1314	3) -11
4) 7 33	5) 1025	6) -14 2
7) 1111	8) -1822	9) -54
10) 027	11) -2515	12) -7 <u> </u>
13) 8 8	14) - 3 ¹ / ₂ ¹ / ₂	15) 7 ³ / ₄ 8

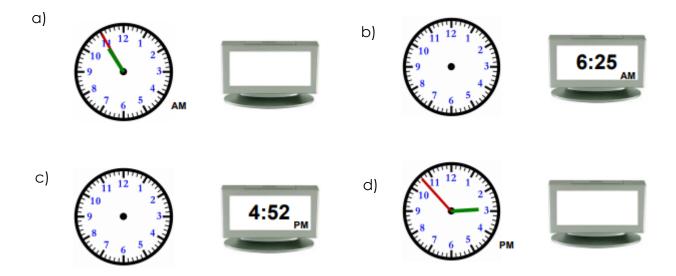
Solve the following inequalities:

a) 5x < 25	b) 7y≥21	c) 6b≤-12	d) 8e < -32
e) X + 4 > 5	f) p+2>11	g) y - 5 < 14	h)p-7<11
i) 2x + 3 < 13	j) 3b + 1 ≤ 10	k) 2x−5≥13	l) 4x + 7 ≥ 11
m) 3c – 5 ≥ 16	n) 16 > 2d + 4	o) 5e + 10 < -5	p) 6g – 7 ≤ 3g + 5
q) 4a + 12 ≥ 2a + 18	r) 3a + 2 ≤ 17 – 2a	s) 40 + 3k < 28 - k	
t) $7(2x + 3) > 8x + 27$	u) 2(5p – 12) ≥ 7p - 18		

TIME REVISION

- 1. How many seconds are there in a minute?
- 2. How many seconds are there in 5 minutes?
- 3. How many seconds are there in 3 and a half minutes?
- 4. How many minutes are in a n hour?
- 5. How many minutes are there in 4 hours?
- 6. How many minutes are there in 2 and a quarter hours?
- 7. How many hours in 1 day?
- 8. How many hours in 3 days?
- 9. How many hours in one week?
- 10. How many days in one week?
- 11. How many days in 7 weeks?
- 12. How many weeks in a year?
- 13. How many weeks in 2 and a half years?
- 14. How many days in one year?
- 15. How many days in 6 years?

- 2. Fill out the missing clock based on the time of its pair:



1.	. Convert the following 12 hours times to 24 hours times:			
	a) 7pm	b) 3am	c) 2.45am	d) 5.20pm
	e) 11.15am	f) 6.52pm	g) midday	h) 10.34pm
	i) 1.24pm	j) 1.17am	k) 3.09pm	I) midnight
2.	Convert the follow	wing 24 hour times	to 12 hours time:	
	a) 1400hrs	b) 0600hrs	c) 1900hrs	d) 1615hrs
	e) 1030hrs	f) 1240hrs	g) 2014hrs	h) 0545hrs

Exercise 4

1. How long from:

i) 0025hrs

a) 2am to 5am b) 6pm to 11pm c) 1300hrs to 1900hrs

k) 0312hrs

l) 1705hrs

- d) 1.30pm to 4.15pm e) 0945hrs to 1205hrs f) 0815hrs to 1540hrs
- g) 6.13pm to 11.38pm h) 0037hrs to 0512hrs

j) 2355hrs

i) 8.15pm to 3.55am (the next day)

2. Gary was running late and missed his bus. He arrived that the bus stop at 8.10am. The next bus was at 8.33am. How long will he have to wait?

3. James and Holly go to see a movie at the cinema. The movie starts at 6.30pm and lasts for 2 hours 25mins. When does the movie end?

4. It takes 45minuts to cook a lasagne. If I put it in the oven at 520pm, when will it be ready?

5. Paul travel To Edinburgh by train from Glasgow. The journey took 55mins. He arrived in Edinburgh at 1405hrs. At what time did he leave Glasgow?

6. Stephen started his jog along the canal at 0715hrs. He finished it at 0823hrs. How long was he jogging for?

7.

Opening Times for the London Eye		
Monday	Closed	
Tuesday to Friday	10am to 7.30pm	
Saturday	8.30am to 9.00pm	
Sunday	11am to 4.30pm	

- a) How many hours is the London Eye open on Sundays?
- b) If I arrived at the London Eye at 6.00pm on a Thursday, how long have I got before it closes?
- c) Which day of the week is the London Eye open the longest?
- d) Which day of the week is the London Eye open the shortest?
- e) I get the train to London on Sunday. My train arrives at the station at 9.15. How long have I got to wait before the London Eye opens?
- f) Which day has the latest closing time?

8.

Here is part of a train timetable			
Canterbury West	10.30	11.15	11.45
Ashford Int	10.45	11.30	12.00
St Pancras Int	11.30	-	12.45
Waterloo	11.50	12.05	13.05

- a) How long does the 10.30 train from Canterbury West take to travel to Waterloo?
- b) Which train is the fastest to get from Canterbury West to Waterloo?
- c) How many minutes later does the second train from Canterbury West leave than the first?
- d) If I catch the 11.45 train from Canterbury West, how many stops are there until I reach Waterloo?
- e) How many trains leave Ashford Int between 11.00 and 12.00?
- f) If I get the 12.45 train at St Pancras Int, how long does it take to get to Waterloo?

1. Convert the following times into decimal hours:			
a) Ismins	b) 30mins	c) 45mins	d) 20mins
e) 6 mins	f) 40mins	g) 3hrs 45mins	h) 1hrs 30mins
) 8hrs 20mins	j) 4hrs 45mins	k) 12hrs 30mins	I) 5hrs 12mins
	•		2.5hrs
	a) 15mins e) 6 mins) 8hrs 20mins Convert the follo [,]	a) 15mins b) 30mins e) 6 mins f) 40mins) 8hrs 20mins j) 4hrs 45mins Convert the following decimal how	a)15minsb)30minsc)45minse)6 minsf)40minsg)3hrs45mins)8hrs20minsj)4hrs45minsk)12hrs30minsConvert the following decimal hours to time:

- e) 10.3333.....hrs f) 9.25hrs g) 6.6666666.....hrs
- h) 3.1hrs i) 0.75hrs k) 5.2hrs