Year 5 maths – Summer 2 Week beginning: 6.7.20

Theme	Lesson 4 of 12 CONSOLIDATION LESSON Formal methods Multiplication	Lesson 5 of 12 CONSOLIDATION LESSON Formal methods Multiplication	Lesson 6 of 12 CONSOLIDATION LESSON Formal methods Multiplication	Lesson 7 of 12 CONSOLIDATION LESSON Formal methods Division	Lesson 8 of 12 CONSOLIDATION LESSON Formal methods Division
Factual fluency (to aid fluency)	**Practise estimating products activity**	**Practise multiplication patterns activity**	**Practise choosing multiples activity**	**Practise division facts activity**	**Practise properties of division activity**
Problem/ activity of the day **Remember, just like in class, you can still show the depth of your knowledge** **LINK**	**(Lesson 1 resources below)** **MAKING LINKS:** In year 4 we learnt to multiply 2 and 3-digit numbers. Today we will continue working with formal multiplication methods. You may want to recap the formal method from year 4 multiplication of 3-digit numbers by a 1-digit number before this lesson. **THINK: (support below)** Can you help me with this problem? My friend has 28 bean plants in her garden. Each bean plant produced 26 beans. How many beans has she grown? *If you have online parent access this lesson is based on Year 5 textbook 5A, chapter 3, lessons 13.* **SEE: (model below)** Check the solution below. Watch the steps for formal multiplication here and the lesson video here. **DO:** Use what you have learnt today to solve: PART 1: Complete the questions in part 1 below. Check your answers below before moving on to: PART 2: Complete the questions in part 2 below.	**(Lesson 2 resources below)** **MAKING LINKS:** Yesterday we worked with formal multiplication methods. We will continue this today. You may want to recap the formal method from year 4 multiplication of 3-digit numbers by a 1-digit number before this lesson. **THINK: (support below)** Can you help me with this problem? £1 used to be worth about 12 times the value of the Hong Kong dollar. If I spent £132, how much would that be in Hong Kong dollars? *If you have online parent access this lesson is based on Year 5 textbook 5A, chapter 3, lessons 14.* **SEE: (model below)** Check the solution below. Refer back to yesterday's lesson videos, if need be. Watch the steps for formal multiplication here and the lesson video here. **DO:** Use what you have learnt today to solve: PART 1: Complete the questions in part 1 below. Check your answers below before moving on to: PART 2: Complete the questions in part 2 below.	**(Lesson 3 resources below)** **MAKING LINKS:** Yesterday we worked with formal multiplication methods. We will continue this today. **THINK: (support below)** Using the digits 1, 2, 3, 4 and 5, make two numbers. One number must be a 3-digit number and the other must be a 2-digit number. Then find their product. Try to make an equation that gives you an odd product and an even product. *If you have online parent access this lesson is based on Year 5 textbook 5A, chapter 3, lessons 15.* **SEE: (model below)** Check the solution below. Refer back to Monday's lesson videos, if need be. Watch the steps for formal multiplication here and the lesson video here. **DO:** Use what you have learnt today to solve: PART 1: Complete the questions in part 1 below. Check your answers below before moving on to: PART 2: Complete the questions in part 2 below.	**(Lesson 4 resources below)** **MAKING LINKS:** Yesterday we worked with formal multiplication methods. Today, we will work with formal division methods. **THINK: (support below)** Can you help me with this problem? My friend poured 2528ml of water into 8 bottles so that each bottle holds the same volume. What is the volume of water in each bottle? *If you have online parent access this lesson is based on Year 5 textbook 5A, chapter 3, lesson 18.* **SEE: (model below)** Check the solution below. Watch method 1on tomorrow's lesson video but remember in today's lesson you will not have any remainders! **DO:** Use what you have learnt today to solve: PART 1: Complete the questions in part 1 below. Check your answers below before moving on to: PART 2: Complete the questions in part 2 below.	**(Lesson 5 resources below)** **MAKING LINKS:** Yesterday we worked with formal division methods. We will continue with this today. **THINK: (support below)** Can you help me with this problem? My friends use two different strategies to divide 376 by 5. Look at both of the methods below. How are they similar? How are they different? *If you have online parent access this lesson is based on Year 5 textbook 5A, chapter 3, lessons 19.* **SEE: (model below)** Check the solution below. Watch method 1and 2 on the lesson video. **DO:** Use what you have learnt today to solve: PART 1: Complete the questions in part 1 below. Check your answers below before moving on to: PART 2: Complete the questions in part 2 below.
Methods, tips, clues & checks	**Day 1 resources and answers (below)**	**Day 2 resources and answers (below)**	**Day 3 resources and answers (below)**	**Day 4 resources and answers (below)**	**Day 5 resources and answers (below)**

See below for resources to support you to THINK-SEE-DO

DAY 1 RESOURCES:

THINK: My friend has 28 bean plants in her garden. Each bean plant produced 26 beans. How many beans has she grown?

If you have online parent access this lesson is based on Year 5 textbook 5A, chapter 3, lessons 13.

DO: Use what you have learnt today to solve:

PART 1: Complete these questions:

a) 60 x 19

b) 13 x 31

c) 42 x 24

d) 39 x 51

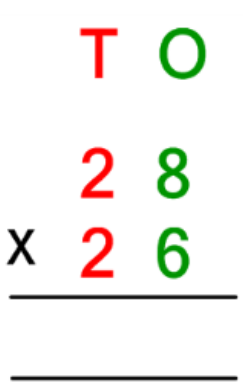
Check your answers below before moving on to:

PART 2: Complete:

29 x 28	44 x 57	24 x 58	30 x 92	67 x 54
65 x 14	41 x 57	91 x 41	22 x 17	24 x 21
96 x 57	44 x 91	15 x 62	23 x 53	17 x 70

After you have multiplied each amount remember to check if you need to add on any amounts you have put in the next place. Use colour to help you to remember to add on the numbers you have had to put in the next column or place.

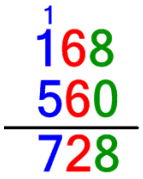
SEE: Recap the formal method from year 4 multiplication of 3-digit numbers by a 1-digit number before this lesson. Watch the steps for formal multiplication here and the lesson video here. Use coloured pens or pencils to help you keep track of each step.



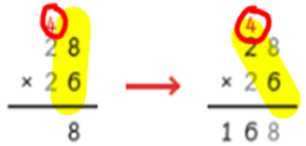
First, write the equation in a vertical form.
Ones in the **ones place** (or column),
Tens in the **tens place** (or column).

28 x 6 = 168 Then, multiply by the **ones**,

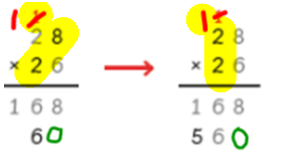
28 x 20 = 560 then by the **tens**.



Finally add the two amounts to reach the total.

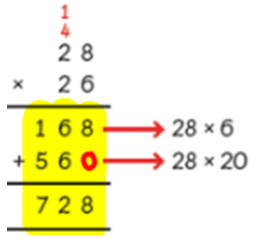


Multiply 28 by 6
8 x 6 = 48
We put 8 in the ones place and 40 in the tens place
20 x 6 = 120 but we must remember to add our 40 (our 4 tens)



Multiply 28 by 20
8 x 20 = 160
We put 6 in the tens place and 100 in the hundreds place
20 x 20 = 400 but we must remember to add our 100 (our 1 hundred)
20 x 28 = 560

REMEMBER: we would usually jot our hundred in the hundreds place.



Add the results of our two multiplication calculations to reach the answer to 28 x 26

DAY 2 RESOURCES:

THINK: £1 used to be worth about 12 times the value of the Hong Kong dollar. If I spent £132, how much would that be in Hong Kong dollars?

If you have online parent access this lesson is based on Year 5 textbook 5A, chapter 3, lessons 14.

DO: Use what you have learnt today to solve:
PART 1: Complete the questions below:
a) 24 x 122
b) 23 x 212
c) Find the product of 12 and 133
d) Find the product of 32 x 123

Check your answers below before moving on to:
PART 2: Complete the questions in part 2 below:

1) 234 x 25 =
2) 368 x 46 =
3) 562 x 22 =
4) 213 x 14 =
5) 132 x 18 =
6) 245 x 37 =
7) 337 x 25
8) 365 x 46
9) 562 x 72
10) 453 x 43
11) 567 x 28
12) 355 x 39

SEE: Recap the formal method from year 4 multiplication of 3-digit numbers by a 1-digit number before this lesson. Refer back to yesterday's lesson videos, if need be. Watch the steps for formal multiplication here and the lesson video here.

First, write the equation, 132 x 12, in a vertical form.

Ones in the **ones place** (or column),
Tens in the **tens place** (or column)
Hundreds in the **hundreds place** (or column).

H	T	O
1	3	2
x	1	2

12 × 132 = ☐

Steps:
- multiply 132 by the ones (2)
132 x 2 = 264

- multiply 132 by the tens (10 or 1 ten)
132 x 10 = 1320

Finally, add the amounts to reach the total.
264 + 1320 = 1584

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   1 3 2
 ×   1 2
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   2 6 4   → multiply by 2
+ 1 3 2 0  → multiply by 10
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   1 5 8 4
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DAY 3 RESOURCES:

THINK: Using the digits 1, 2, 3, 4 and 5, make two numbers. One number must be a 3-digit number and the other must be a 2-digit number. Then find their product.
Try to make an equation that gives you an odd product and an even product.

If you have online parent access this lesson is based on Year 5 textbook 5A, chapter 3, lessons 15.

DO: Use what you have learnt today to solve:
PART 1: Complete the questions below:
a) 135 x 24
b) 145 x 23
c) 245 x 13
d) 459 x 13

Check your answers below before moving on to:
PART 2: Complete the questions in part 2 below.

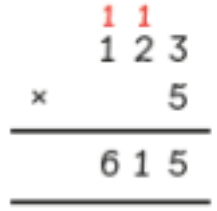
437 x 52	603 x 10	939 x 51	177 x 51	141 x 38
658 x 67	618 x 37	480 x 19	679 x 60	251 x 33
205 x 47	220 x 30	674 x 56	256 x 47	278 x 14

SEE: Follow the same steps as you have done over the previous two days. Refer back to Monday's lesson videos, if need be. Watch the steps for formal multiplication here and the lesson video here.

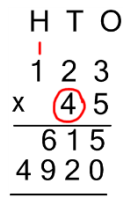
I made a 3-digit number, 123, and multiplied it by a 2-digit number, 45. My equation was 123 x 45.

Write the equation, 123 x 45, in vertical form.

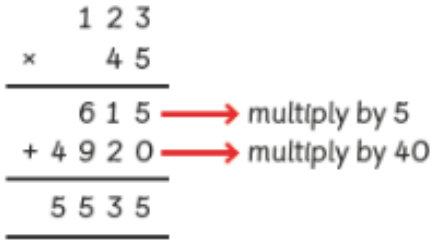
First, multiply by the ones amount.
123 x 5



Then multiply by the tens number.
123 x 40 (123 x 4 tens):



Then add the amounts to reach the total.



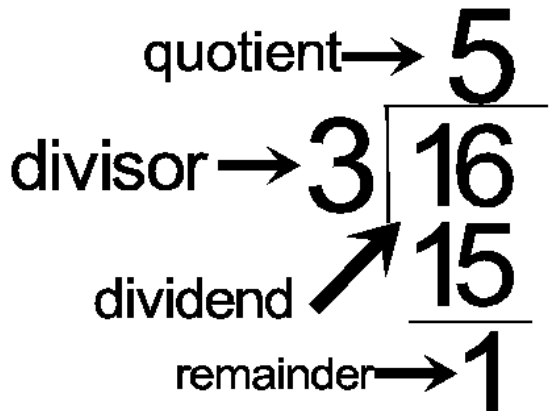
123 × 45 = 5535

Multiply 123 by the ones (5)
123 x 5 = 615

Multiply 123 by the tens (40 or 4 tens)
123 x 40 = 4920

Finally, add the amounts to reach the total.
615 + 4920 = 5535

Before we move onto division remind yourself of the language we use in division. We learnt this in year 4 and year 5:



Remember:
Dividend = the amount you are dividing
Divisor = the amount you are dividing by
Quotient = the answer to the division equation

DAY 4 RESOURCES:

THINK: My friend poured 2528ml of water into 8 bottles so that each bottle holds the same volume. What is the volume of water in each bottle?

If you have online parent access this lesson is based on Year 5 textbook 5A, chapter 3, lesson 18.

DO: Complete these:

PART 1:

a) 5048 ÷ 4
b) 5048 ÷ 8
c) 9114 ÷ 6
d) 9114 ÷ 3

Check your answers below before moving on. Remember to estimate.

PART 2:

3)2076	7)6888	5)3025	5)1610
8)2064	9)8496	9)3447	3)1386
8)2072	7)2989	6)3966	6)2310

SEE: Watch method 1on tomorrow's lesson video but remember in today's lesson you will not have any remainders!

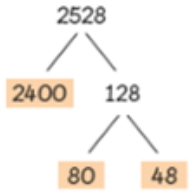
First write the equation you would need to solve to answer the question:

2528ml ÷ 8 =

Then write down the multiples of the **divisor** so that we can to easily recognise how many we have in the **dividend**.

In this division problem we need to find **how many groups of 8** there are in **2528** so we jot down the multiples of 8:

8, 16, 24, 32, 40, 48, 56, 64, 72, 80, 88, 96



Next, I can partition the dividend into multiples of 8.

I can see 24 is a multiple of 8 so 2400 will be too!
2400 is **300** groups of 8 (**300** x 8)

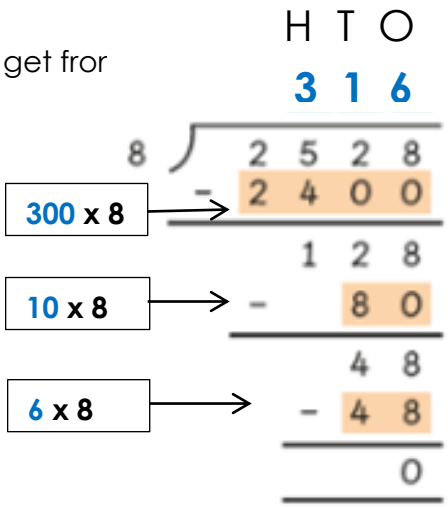
That leaves **128**. I know I can find more multiples of 8 in 128.

80 and **48** are multiples of 8 that I can get fror 80 is **10** x 8 and 48 is **6** x 8.

Now I have,
2400 ÷ 8 = 300
(300 x 8 = 2400)

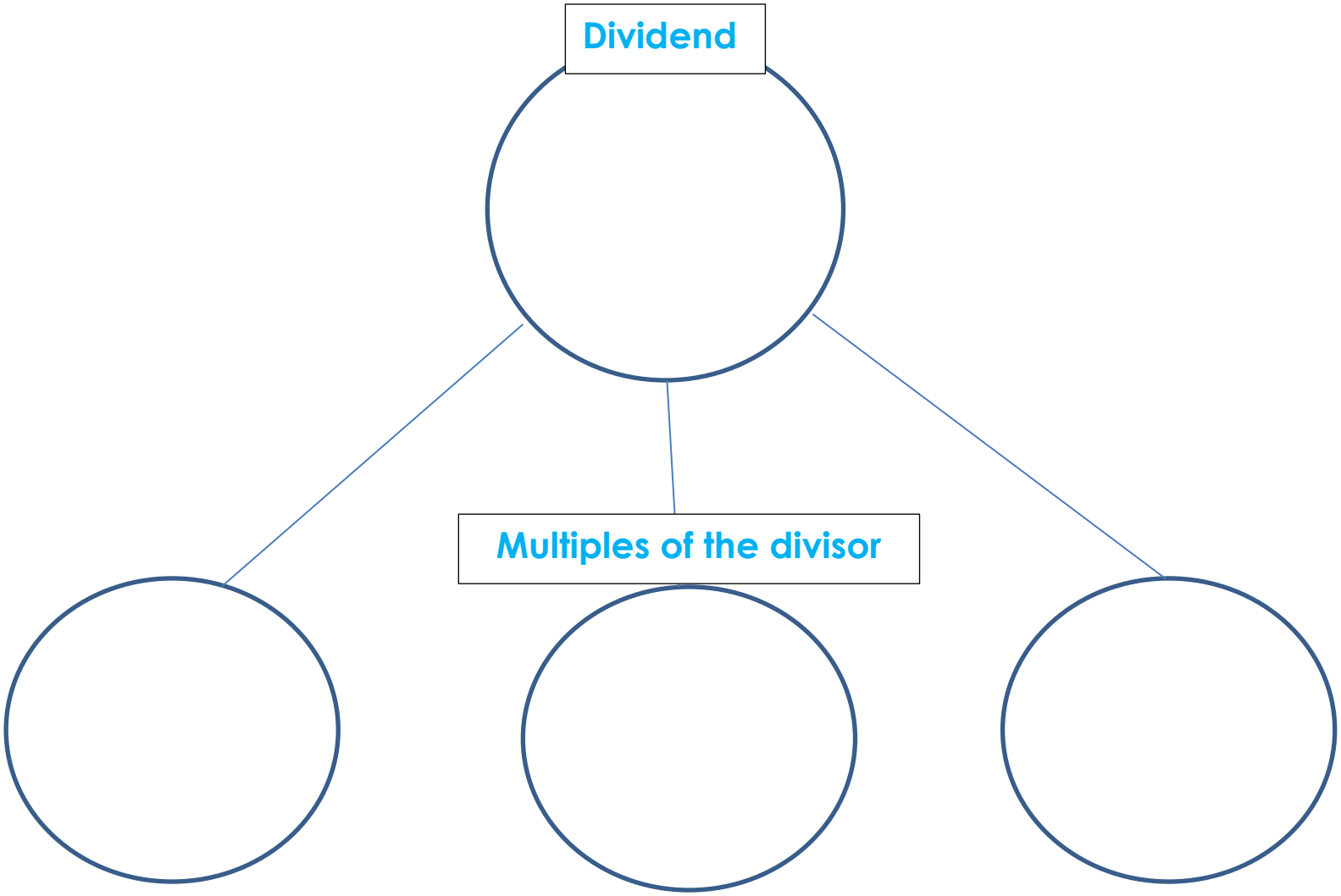
80 ÷ 8 = 10
(10 x 8 = 80)

48 ÷ 8 = 6
(6 x 8 = 48)



Finally, I can see how many 8s were in 2528ml.
300 + 10 + 6 = 316
3 Hundreds + 1 Ten + 6 Ones

You could use a part-whole diagram to partition your dividend into multiples of the divisor:



DAY 5 RESOURCES:

THINK: My friends use two different strategies to divide 376 by 5. Look at both of the methods below. How are they similar? How are they different?

If you have online parent access this lesson is based on Year 5 textbook 5A, chapter 3, lessons 19.

DO: PART 1:

You might want to try the 'compact' method for dividing:

a) 99 ÷7
b) 347 ÷ 6
c) 593 ÷ 3
d) 278 ÷ 8

Check your answers below before moving on to:

PART 2:

9)949 2)1915 3)1939 2)263

7)4651 9)5557 4)2695 4)3405

4)2437 3)1139 7)5163 8)1730

SEE: We are looking at two methods today. **You can use either method when you do your work as long as you remember the remainder! Watch method 1 and 2 on the lesson video.**
Use the part-whole diagram to help you partition the amount you are dividing (the dividend) into multiples of the amount you are dividing by (the divisor).

376 ÷ 5 =

Follow the same method as yesterday:

First, write down the multiples of the **divisor** so that we can to easily recognise how many we have in the **dividend**.

5, 10, 15, 20, 25, 30, 35, 40, 45, etc

Then partition your dividend into multiples of the divisor. In this case multiples of 5:

So, 376 = 350 and 25 and 1

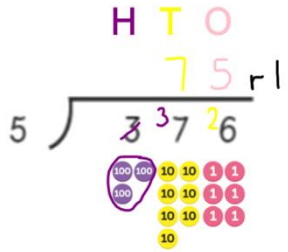
Divide each of those numbers by 5.

350 ÷ 5 = 70
25 ÷ 5 = 5
1 is the remainder.

Finally add up those groups of 5 and note the number of groups on the top of the 'bus stop'.

70 + 5 = 75 and 1 is the remainder

With the compact method, you must ask yourself, 'Can I take groups of 5 from each place?'
I only have a group of **3** in the hundreds place so I cannot take groups of 5 from the hundreds place. I must move the **3** hundreds into the tens place.



	This gives me 37 in the tens place. Can I take groups of 5 from the tens place? Yes, I can take 7 groups of 5 from the tens place (37 ÷ 5 = **7** with 2 tens left). I am left with **2** which isn't enough to take another group of 5 from so I move that into the ones place. This gives me 26 in the ones place. Can I take groups of 5 from the ones place? Yes, there are **5** groups of 5 in the ones place with 1 remaining. 26 ÷ 5 = 5 r 1 Can I find any more groups of 5? No, I just have 1 remaining.

ANSWERS – part 1:

Day 1	Day 2	Day 3	Day 4	Day 5
Part 1: a) 60 x 19 =1,140 b) 13 x 31 = 403 c) 42 x 24 = 1,008 d) 39 x 51 = 1,989	Part 1: a) 24 x 122 = 2,928 b) 23 x 212 = 4,876 c) The product of 12 and 133 is 1,596 d) The product of 32 x 123 is 3,936	Part 1: a) 135 x 24 = 3240 b) 145 x 23 = 3335 c) 245 x 13 = 3185 d) 459 x 13 = 5967	Part 1: a) 5048 ÷ 4 = 1,262 b) 5048 ÷ 8 = 631 c) 9114 ÷ 6 = 1,519 d) 9114 ÷ 3 = 3,038	Part 1: a) 99 ÷7 = 14 r1 b) 347 ÷ 6 = 57 r 5 c) 593 ÷ 3 = 197 r 2 d) 278 ÷ 8 = 34 r 6

ANSWERS– part 2:

Day 1

Part 2:

29 x 28 = 812	44 x 57 = 2508	24 x 58 = 1392	30 x 92 = 2760	67 x 54 = 3618
65 x 14 = 910	41 x 57 = 2337	91 x 41 = 3731	22 x 17 = 374	24 x 21 = 504
96 x 57 = 5472	44 x 91 = 4004	15 x 62 = 930	23 x 53 = 1219	17 x 70 = 1190

Day 2

Part 2:

1) 234 x 25 = 5,850
2) 368 x 46 = 16,928
3) 562 x 22 = 12,364
4) 213 x 14 = 2,982
5) 132 x 18 = 2,376
6) 245 x 37 = 9,065
7) 337 x 25 = 8,425
8) 365 x 46 = 16,790
9) 562 x 72 = 40,464
10) 453 x 43 = 19,479
11) 567 x 28 = 15,876
12) 355 x 39 = 13,845

Day 3

Part 2:

437 x 52 = 22724	603 x 10 = 6030	939 x 51 = 47889	177 x 51 = 9027	141 x 38 = 5358
658 x 67 = 44086	618 x 37 = 22866	480 x 19 = 9120	679 x 60 = 40740	251 x 33 = 8283
205 x 47 = 9635	220 x 30 = 6600	674 x 56 = 37744	256 x 47 = 12032	278 x 14 = 3892

Day 4

Part 2:

692 r 0 (3) 2076)	984 r 0 (7) 6888)	605 r 0 (5) 3025)	322 r 0 (5) 1610)
258 r 0 (8) 2064)	944 r 0 (9) 8496)	383 r 0 (9) 3447)	462 r 0 (3) 1386)
259 r 0 (8) 2072)	427 r 0 (7) 2989)	661 r 0 (6) 3966)	385 r 0 (6) 2310)

Day 5

Part 2:

105 r 4 (9) 949)	957 r 1 (2) 1915)	646 r 1 (3) 1939)	131 r 1 (2) 263)
664 r 3 (7) 4651)	617 r 4 (9) 5557)	673 r 3 (4) 2695)	851 r 1 (4) 3405)
609 r 1 (4) 2437)	379 r 2 (3) 1139)	737 r 4 (7) 5163)	216 r 2 (8) 1730)