East Renfrewshire Council: Education Department
Practitioner Moderation Template

Prior to the moderation exercise, please complete the following information and submit it to your facilitator with assessment evidence from one learner that you judge to have successfully attained the Es and Os.

Practitioner Code	T6
Curriculum Area(s)	Mathematics
Level	3rd Level
Stage(s)	S1

Experiences and Outcomes:

I can solve problems by carrying out calculations with a wide range of ~~fractions,~~ decimal fractions ~~and percentages,~~ using my answers to make comparisons and informed choices for real-life situations.
MNU 3-07a

I can round a number using an appropriate degree of accuracy, having taken into account the context of the problem.
MNU 3-01a

Learning Intentions:

- To solve problems involving decimals.
- To use my answers to make comparisons and informed choices for real life situations.
- To round a number to an appropriate degree of accuracy.
- To recognise similarities between new problems and problems I have solved before.
- To carry out the necessary calculations to solve problems in new or unfamiliar contexts.

Success Criteria:
Please list SC and give brief detail on how learners were involved in their creation.

- **SC1** I can read, write, record, order and sequence decimal notation to tenths, hundredths and thousandths
- **SC2** I can understand the equivalence between tenths, hundredths, thousandths and decimal notation
- **SC3** I can add and subtract decimals with one or more decimal places
- **SC4** I can multiply and divide decimals by whole numbers
- **SC5** I can use rules to multiply and divide decimals by 10, 100 and 1000
- **SC6** I can round decimal numbers to one or more decimal places
- **SC7** I can round decimals to estimate answers to calculations
- **SC8** I can make decisions and choices based on their answers to calculations including real-life situations where appropriate
- **SC9** I can understand the impact of rounding to an appropriate degree of accuracy when making and justifying estimates and approximations

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Briefly outline the context and range of quality **learning experiences** that have been planned making reference to the chosen design principles. Make specific reference to **breadth, challenge & application**.

- Students given the opportunity to undertake active learning using SHOW-ME boards,

treasure hunts, Kahoots and creating a poster. **(Evidence 1)**

- Students given the opportunity to learn using traditional techniques, using worksheets and textbooks. **(Evidence 2)**

- Students given the opportunity to learn using Maths Workouts and exit questions which provide unfamiliar contexts, breadth, challenge and application. **(Evidence 3)**

- Students given personalised homework which stretches the more able and consolidates for the less able. **(Evidence 4)**

Record the planned assessment that will be gathered to meet the success criteria (Say, Write, Make, and Do) considering **breadth, challenge and application**.

SAY – Verbal Answers

WRITE – Jotter work, Exit tickets, Show me boards, worksheets

MAKE – A poster

DO – Maths Workouts, Treasure Hunt, Settler, Calculated colouring, Tarsia

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Briefly outline the oral/written **feedback** given to the pupil on progress and **next steps**, referring to the learning intention and success criteria.

Feedback

The pupil was given feedback throughout the tasks. There was a variety of self, peer and teacher assessment. The pupil was confident and able in all the tasks, and answered majority of questions correctly, both verbally through question/answer and written work. There was positive feedback given, this allowed the pupil to be fully aware of their progress and next steps throughout the topic. Pupil made aware of learning intentions/success criteria at the start of each lesson.

The pupil was able to discuss their knowledge and understanding coherently amongst their peers as they successfully created a poster created to show real life examples.

A Pupil/Teacher Evaluation was completed at the end of the topic to reinforce the feedback given throughout. (see evidence attached). Parent signs Pupil/Teacher evaluation so aware of development areas.

Formative assessment and formal homework scores are recorded on shared area.

Next Steps

Pupils will continue to apply their learning in this topic to more challenging questions, including topics such as significant figures and scientific notation. Pupils will also continue to consolidate this work through period starters.


Pupil Voice:
What have you learned? How did you learn? What skills have you developed?

Pupil voice is evident and links in with the success criteria. This is demonstrated through self and peer assessment, which is clear from the work completed on the Show Me boards and the poster they created where the pupils were able to discuss their learning and explain what skills they had utilised. A Pupil/Teacher Evaluation is completed at the end of the topic.

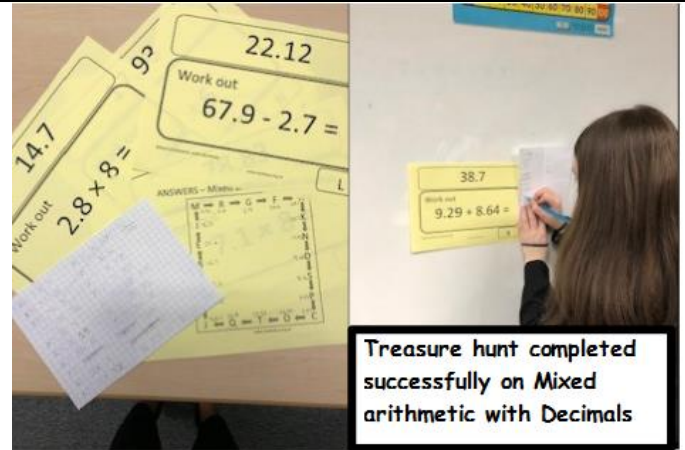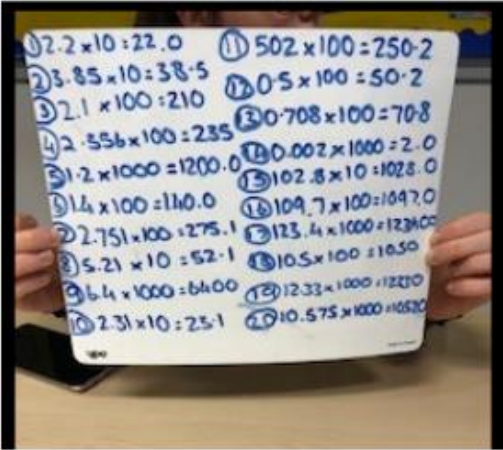**Did the learner successfully attain the outcomes?**   <u>**YES**</u>
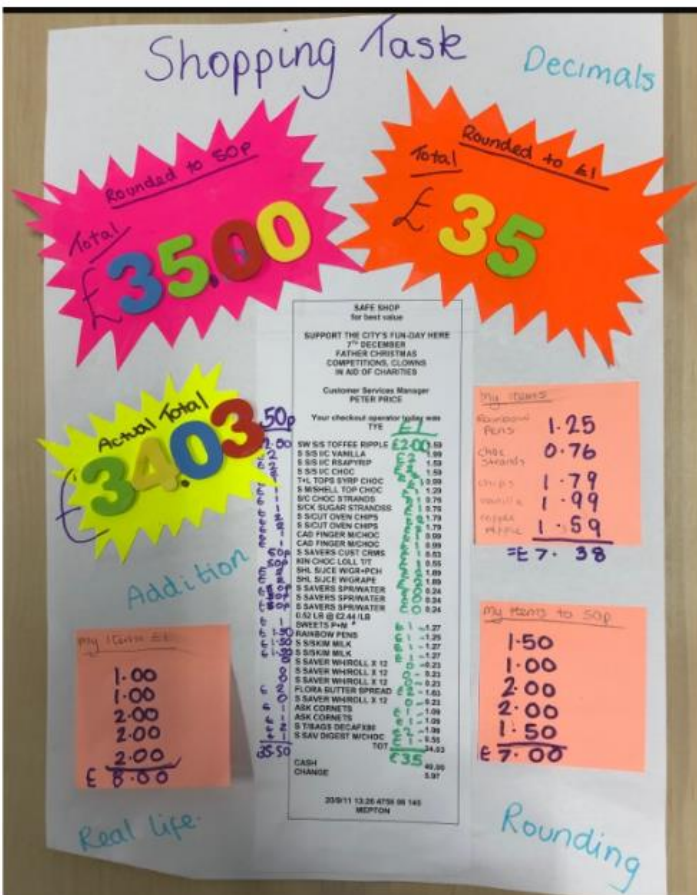
Evidence 1

SC 1 & 2

SC 1 & 2

SC 5
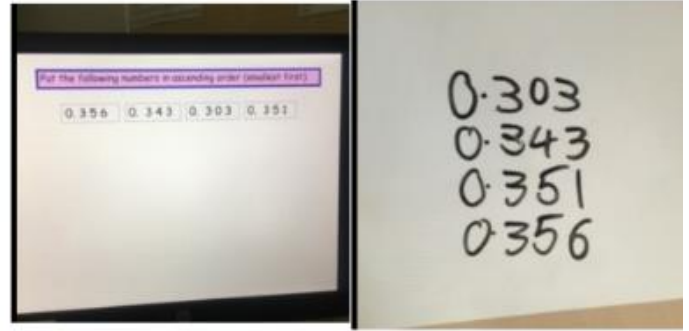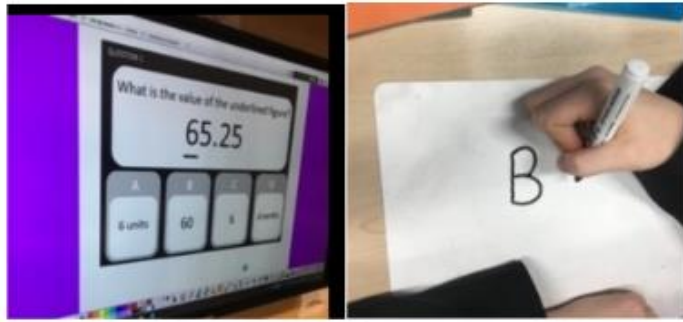
Treasure hunt completed successfully on Mixed arithmetic with Decimals

SC 4

SHOPPING TASK

When you shop at a supermarket, you can estimate the total cost of your

shopping by rounding the price of every item to the nearest £1.

TASK 1

Make an estimate for the bill for the receipt you have been given.
Try making an estimate in this way next time you go shopping! See how close your estimate is to the final total.

TASK 2

This time, round the items to the nearest 50p. Will this give a more accurate estimate? If it does not, explain why not.

TASK 3

Pick 5 items from the list that you would like to buy! Write them down along with the price.

(a) Estimate your bill for these 5 items and write it down
(b) Find the total cost of the 5 items. How close was your estimate?
(b) Find the difference between the first 2 items
(c) Find the cost of 4 of your last item on your list.

TASK 4

On an A4 poster have a heading (Shopping Task - Decimals)
Put the answers with working to the above 4 questions

TASK COMPLETE!!

SC 3, 6, 7, 8, & 9

Evidence 2

Name Leigh   Ordering decimals

0.4	0.5	0.6	0.32	0.11
0.699	0.904	0.602	0.41	0.89
0.91	0.102	0.9	0.02	0.1
0.49	0.8	0.05	0.62	0.9
0.34	0.101	0.49	0.41	0.11

Which is the smallest? 0.89, 0.9, 0.901	Which is the smallest? 0.8, 0.801, 0.87	Which is the largest? 0.1, 0.05, 0.019	Which is the smallest? 0.602, 0.7, 0.71
Which is the smallest? 0.41, 0.5, 0.49	Which is the smallest? 0.32, 0.34, 0.321	Which is the largest? 0.49, 0.409, 0.904	Which is the largest? 0.1, 0.11, 0.101
Which is the smallest? 0.5, 0.501, 0.51	Which is the largest? 0.02, 0.01, 0.015	Which is the largest? 0.701, 0.7, 0.699	Which is the largest? 0.05, 0.02, 0.041
Which is the largest? 0.62, 0.602, 0.6	Which is the largest? 0.101, 0.1, 0.01	Which is the largest? 0.9, 0.91, 0.904	Which is the smallest? 0.6, 0.62, 0.606
Which is the largest? 0.2, 0.13, 0.102	Which is the largest? 0.9, 0.89, 0.809	Which is the largest? 0.34, 0.304, 0.32	Which is the smallest? 0.4, 0.41, 0.401

0·11   0·9   0·49   0·49   0·41   TOTAL 2·40

www.mathsbox.org.uk

SC 1 & 2

Name Leigh   Rounding to 1 decimal place

2.8	0.2	1.5	2.9	0.8
0.2	0.8	1.7	1.6	2.6
2.2	1.5	3.2	3.4	0.6
0.3	3.9	0.3	0.4	1.8
2.5	1.8	2.1	3.4	0.1

0.266   2.854   1.187   2.091
0.154   2.76   0.287   1.265
1.67   2.155   1.825   2.765
2.85   2.66   1.45   0.765
1.445   3.267   3.456   2.052

0·2   1·6   0·3   0·4   2·5   TOTAL 5

www.mathsbox.org.uk

SC 6

3. Show your working in answering the following questions :-

a. A packet of crisps weighs 26·7 grams. What is the weight of 6 packets ?

b. Jamie is paid £13·75 per day as a strawberry picker. How much will he earn altogether working each day from Monday to Friday ?

c. A canister holds 16·35 litres of acid. How much acid will there be in 8 canisters ?

d. By how much is 7 × 0·96 bigger than 8 × 0·83 ?

e. It says on the packet that the grass food will cover 12·8 m² of lawn. How much lawn can be treated with 9 packets ?

f. A tortoise covered 18·26 metres in the space of 1 hour. At this speed, how far will it travel in 6 hours ?

g. During a storm, 2·34 centimetres of rain fell every hour. What depth of rain fell during the 8 hours the storm lasted ?

3. Show your working in answering the following questions :-

a. 8 packets of sweets weigh 385·6 grams. What is the weight of 1 packet ?

b. Tony is paid £44·94 for working 7 hours as a barman. How much does he earn each hour ?

c. I walked 23·45 kilometres in 5 hours. How far had I travelled, on average, each hour ?

d. I bought 6 lengths of fencing to surround my garden. The total length of the 6 pieces together was 11·76 metres. What was the length of each piece of fencing ?

e. To find a "quarter" of anything, you simply **divide by 4**.

(i) What is a quarter of 39·56 ?   (ii) What is a third of 17·88 ?

(iii) What is a sixth of 50·04 ?   (iv) What is a fifth of 106·25 ?

(v) What is a ninth of 76·05 ?   (vi) What is an eighth of 1·92 ?

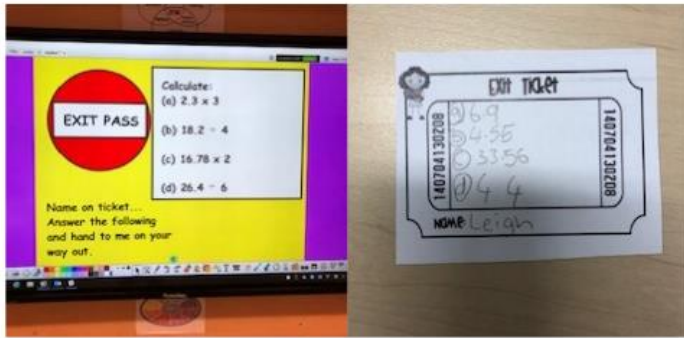## SC 4

Calculated Colouring 71

Round the numbers to 2 decimal places.
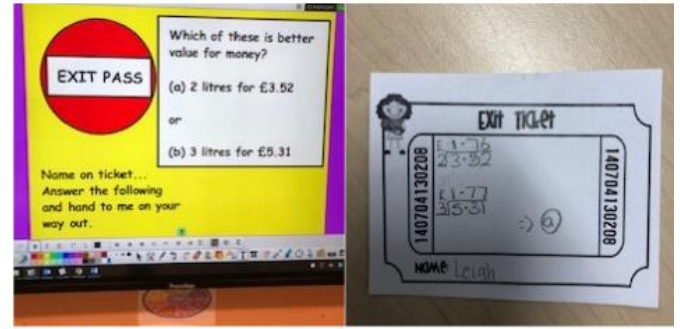Now colour each area according to the Key below.

Key

Red	Black	Pink	Blue	Grey	White	Brown
2.12	2.13	2.14	2.15	2.16	2.17	2.18

SC 6

Evidence 3

SC 4

SC 8

Maths Workout 1 - Topic 4 — Adding Decimals (left)

			=	
a)	3.7	+ 0.5	=	4.2
b)	5.6	+ 8.1	=	13.7
c)	7.9	+ 5.7	=	13.6
d)	6.2	+ 4.8	=	11.0
e)	9.3	+ 2.9	=	12.2
f)	97.9	+ 37.6	=	135.5
g)	5.8	+ 57.3	=	63.1
h)	17.2	+ 86.3	=	103.5
i)	69.4	+ 90.6	=	160.0
j)	29.1	+ 52.1	=	81.2

SC 3

Maths Workout 1 - Topic 4 — Adding Decimals (right)

		=		
1.6	+ 1.2	=	2.8	✓
8.1	+ 3.3	=	11.4	✓
5.6	+ 0.5	=	6.1	✓
2.8	+ 4.2	=	7.00	✓
6.1	+ 3.8	=	9.9	✓
93.3	+ 28.1	=	121.4	✓
67.3	+ 11.4	=	78.7	✓
16.4	+ 47	=		
50.7	+ 98.5	=		
52.8	+ 5	=		

SC 3

Maths Workout 1 - Topic 4 — Number Triangles (left)

Target 1

Complete the following number triangles. A number must equal the total of the two numbers that it rests on.

a) 31.6, 16.7, 9.3, 6.8
b) 34.1, 13.9, 9.3, 1
c) 35.1, 14.5, 12.8, 5.9
d) 44.2, 20.5, 12.7, 7.4
e) 66.3, 32.4, 14, 6.1
f) 18.4 19.3, 8, 5.9

SC 3

Maths Workout 1 - Topic 4 — Number Triangles (right)

Target 1

Complete the following number triangles. A number must equal the total of the two numbers that it rests on.

a) 31.6, 15.8 15.8, 9.1 6.7 9.1, 5.3 3.8 2.9 6.2 ✓
b) 40.5, 20.6 19.9, 10 10.6 9.3, 3 7 3.6 5.7 ✓
c) 45.3, 22.9 22.4, 12.2 10.7 11.4, 8.7 3.5 7.2 4.2 ✗
d) 49.6, 24.7 24.9, 11.5 13.2 11.7, 0.8 10.7 2.5 9.2 ✓
e) 72.8, 39.5 33.3, 19 20.5 12.8, 10.1 8.9 11.6 1.2 ✓
f) 42.4, 23 19.4, 10.4 12.6 6.8, 0.4 10 2.6 4.0 ✗
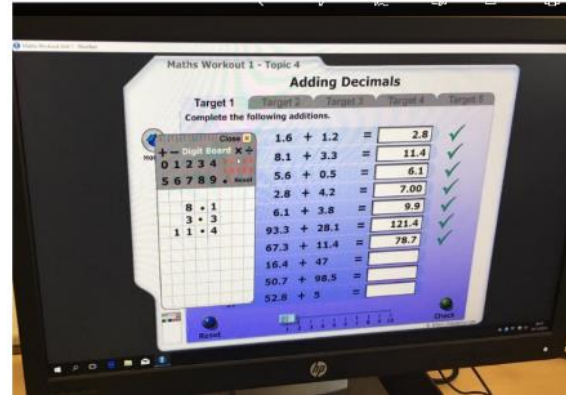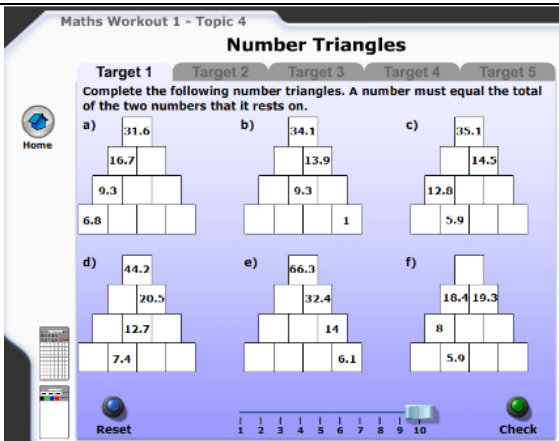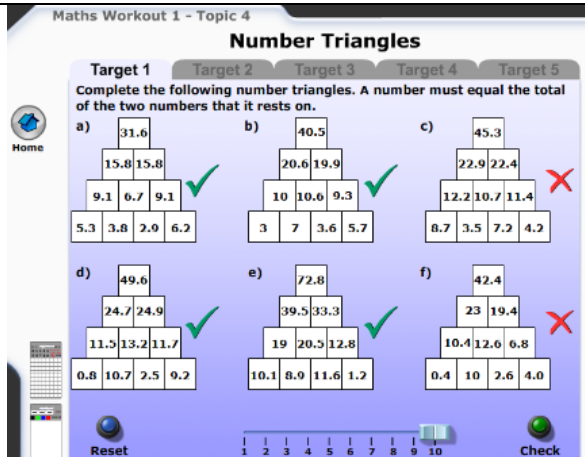
SC 3

Evidence 4

Homework **32**
NON-CALCULATOR

Exercise 1

1. Calculate each of the following:
   (a) 3.152 + 6.842
   (b) 6.34 - 4.585
   (c) 7.109 + 12.978

2. Round the following to 1 decimal place:
   (a) 3.46   (b) 12.705   (c) 16.549

3. What does the bold number represent 8.3_7_4

4. Order the following numbers in increasing order:
   1.211, 1.112, 1.212, 1.121, 1.111, 1.221, 1.122

5. When Salman was 7 years old he was 1.13m tall, now he is 1.54m tall. How much has he grown?

6. Peter has £7.58 and Komel has £16.54, how much more does Komel have than Peter?

Exercise 2

1. Calculate each of the following:
   (a) 9.243 + 7.555
   (b) 2.879 - 0.999
   (c) 6.1 - 4.767
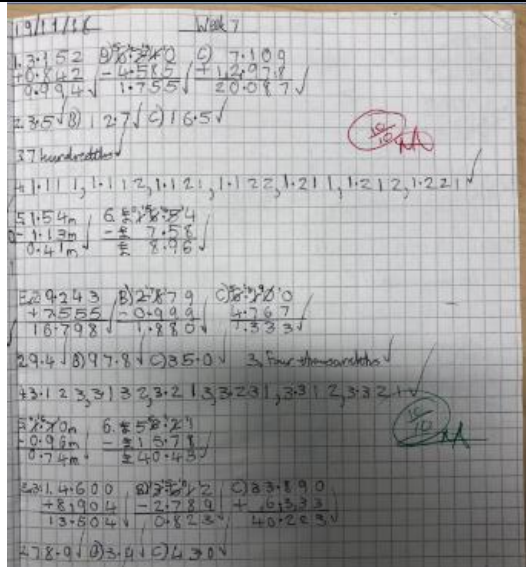
2. Round the following to 1 decimal place:
   (a) 9.38   (b) 97.78   (c) 34.959

3. What does the bold number represent 0.56_4_

4. Order the following numbers in increasing order:
   3.213, 3.312, 3.132, 3.231, 3.321, 3.123

5. When Salman was 5 years old he was 0.96m tall, now he is 1.7m tall. How much has he grown?

6. Peter has £15.78 and Komel has £56.21, how much more does Komel have than Peter?

SC 1, 2, 3, 6

Feedback and Next Steps

Mathematics Department
S1 Unit 2–DECIMALS
Pupil/Teacher Evaluation

Individual Outcomes:

✓	I can interpret a scale involving decimals.	MNU 2-07a
✓	I can identify the correct place value.	MNU 2-07a
✓	I can put decimals in order.	MNU 3-07a
✓	I can round to one and two decimal places	MTH 3-01a
✓	I can add/subtract/multiply and divide with decimals	MNU 3-07a
✓	I can multiply and divide a decimal by 10, 100 and 1000 in the context of a real life problem.	MNU 3-07a
✓	I can multiply and divide a decimal by a whole number in the context of a real life problem.	MNU 3-07a
✓	I can solve problems using decimals in an unfamiliar context.	MNU 3-07a

		Green	Orange	Red
✓	I have completed homework 1 –	(Green)	Orange	Red

✓	I have completed a real-life numeracy task. *Poster on shopping*

Pupil Evaluation:

How am I doing? How do I know? What do I need to do next?

I am confident working with decimals, my progress is better and feedback. I need to continue practicing my decimals

Pupil Signature: [redacted]   Date: 6/12/18

Teacher Evaluation:

Grade:	Comment:
P.	*Well done [redacted], you've made really good progress with this topic and fully participated and enjoyed all the tasks!*

Teacher Signature: [redacted]   Date: 7/12/18.
Parent Signature: [redacted]   Date: 14/12/18