

Regional Improvement Collaborative: West Partnership
Practitioner Moderation Template (PMT)

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.

Evidence Code	J9
Curriculum Area(s)	Mathematics and Numeracy
Level	Fourth
Stage(s)	S2

Experiences and Outcomes (highlight the relevant aspects of each E and O):

I can explain how different methods can be used to find the perimeter and area of a simple 2D shape or volume of a simple 3D object.
MNU 2-11c

I can use the common units of measure, convert between related units of the metric system and carry out calculations when solving problems.
MNU 2-11b

Having explored a range of 3D objects and 2D shapes, I can use mathematical language to describe their properties, and through investigation can discuss where and why particular shapes are used in the environment.
MTH 2-16a

I can solve practical problems by applying my knowledge of measure, choosing the appropriate units and degree of accuracy for the task, and using a formula to calculate area or volume when required.
MNU 4-11a

Planning

Learning Intentions:

- To calculate the area of a parallelogram.
- To substitute values into a formula.
- To use correct units of area.

Benchmarks:

- **Calculates the area of squares, rectangles and right-angled triangles in square millimetres (mm²), square centimetres (cm²) and square metres (m²).**
- **Chooses appropriate units for length, area and volume when solving practical problems.**
- **Converts between standard units to three decimal places and applies this when solving calculations of length, capacity, volume and area.**
- **Calculates the area of a 2D shape where the units are inconsistent.**
- **Calculates the area of kites, parallelograms and trapeziums.**

Assessment

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

1. I can choose the correct lengths to use to calculate the area of a parallelogram.
2. I know that the area of a parallelogram uses the same formula as the area of a square or rectangle using the base and vertical height.
3. I can substitute values correctly into a formula.
4. I know how to find the area of a parallelogram given the information required.
5. I know the correct units to use for area.

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**.

Prior to this lesson, learners had already experienced and have good understanding of properties and areas of squares, rectangles and triangles. They had worked with units of length and area. They had learned and understood how to substitute values correctly into a formula. Having developed their skills in all these areas, they were prepared to explore how to calculate the area of a parallelogram given the base and a vertical height.

Lessons starters were used to revisit this previous knowledge in preparation for the lesson.

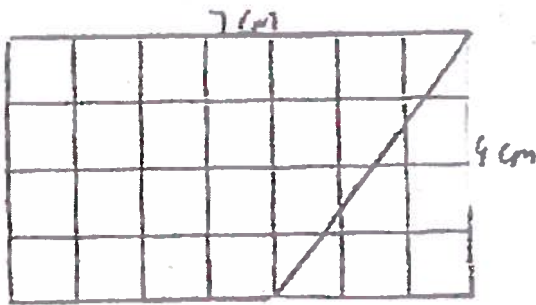
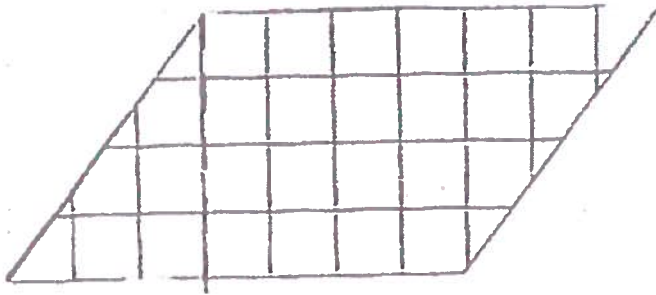
Record the planned assessment that will be gathered to meet the success criteria considering **breadth, challenge and application**.

Learners had the opportunity to work with peers, discussing how to calculate the parallelogram. Evidence is in the written work attached and the verbal feedback to Faculty Head at some time after the learning to assess depth of learning and ability to recall how to calculate the area of a parallelogram. Learners were successful in all aspects of this.

PT

4-11-19

Area of a parallelogram



$$A = l \times b$$

$$= 7 \times 4$$

$$= 28 \text{ cm}^2$$

P2 Exercise 3

41) 30d

P5 Exercise part

a b c

Area of a parallelogram = length \times breadth

$$A = l \times b$$

It is the same as the area of a rectangle

Exercise 1

53

$$4) A = l \times b$$

$$= 8 \times 6$$

$$= 48 \text{ cm}^2$$

$$b) A = l \times b$$

$$= 15 \times 7$$

$$= 105 \text{ cm}^2$$

$$c) A = l \times b$$

$$= 17 \times 11$$

$$= 187 \text{ cm}^2$$

$$d) A = l \times b$$

$$= 6 \times 7$$

$$= 42 \text{ cm}^2$$

$$e) A = l \times b$$

$$= 2.3 \times 6$$

$$= 13.8 \text{ cm}^2$$

$$f) A = l \times b$$

$$= 45 \times 24$$

$$= 1080 \text{ cm}^2$$

$$g) A = l \times b$$

$$= 12 \times 6$$

$$= 72 \text{ cm}^2$$

$$h) A = l \times b$$

$$= 20 \times 3.2$$

$$= 64 \text{ cm}^2$$

$$i) A = l \times b$$

$$= 120 \times 30$$

$$= 3600 \text{ cm}^2$$

well done

$$\begin{aligned}
 3. \quad B &= 9\text{cm} \quad H = 110\text{mm} \\
 A &= B \times H \\
 &= 9 \times 11 \\
 &= 99\text{cm}^2
 \end{aligned}$$

Sc 3

Exercis 4

$$\begin{aligned}
 1. \quad B &= 15\text{cm} \quad H = 5\text{cm} \\
 A &= B \times H \\
 &= 15 \times 5 \\
 &= 75\text{cm}^2 \checkmark
 \end{aligned}$$

$$\begin{aligned}
 2a) \quad B &= 9\text{cm} \quad H = 7\text{cm} \\
 A &= B \times H \\
 &= 9 \times 7 \\
 &= 63\text{cm}^2 \checkmark
 \end{aligned}$$

$$\begin{aligned}
 b) \quad B &= 12\text{cm} \quad H = 4\text{cm} \\
 A &= B \times H \\
 &= 12 \times 4 \\
 &= 48\text{cm}^2 \checkmark
 \end{aligned}$$

$$\begin{aligned}
 c) \quad B &= 14\text{cm} \quad H = 5 \\
 A &= B \times H \\
 &= 14 \times 5 \\
 &= 70\text{cm}^2 \checkmark
 \end{aligned}$$

$$\begin{aligned}
 d) \quad B &= 6\text{cm} \quad H = 13\text{cm} \\
 A &= B \times H \\
 &= 6 \times 13 \\
 \text{Sc 5} &= 78\text{cm}^2 \checkmark
 \end{aligned}$$

$$\begin{aligned}
 e) \quad B &= 2\text{cm} \quad H = 12\text{cm} \\
 A &= B \times H \\
 &= 2 \times 12 \\
 &= 24\text{cm}^2 \checkmark
 \end{aligned}$$

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

The learner received feedback through oral and written feedback in the form of self, peer and teacher assessment. The learner could answer questions asked orally and was successful in their practice exercise. Starters and exit polls were used in lessons after initial teaching to revisit learning.

In discussion with the learner a few weeks later, they were able to show good understanding and recall of their learning and were able to answer questions asked of them with regards to how to calculate the area of a parallelogram. They were able to explain what information they would require to calculate this and the procedure of how to calculate the area of a parallelogram with correct units.

Pupil Voice:

What have you learned? How did you learn? What skills have you developed?

"I found it difficult at first, but I practiced more in class and then at home using my homework exercises with my mum and found it easy after that."

"I already knew how to multiply and know how to find areas like squares and rectangles from before."

"I remembered the units for area from before."

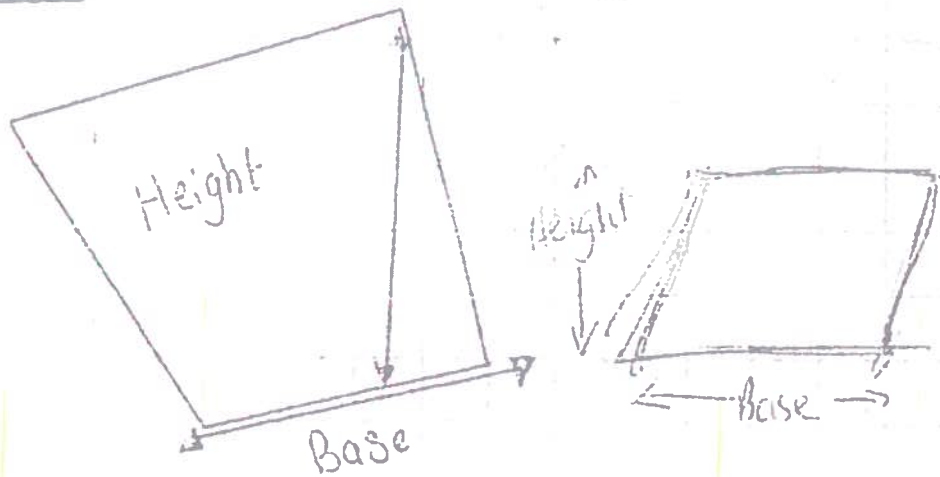
"I know that you use the base and the vertical height, not a slanting height to work out the area."

Did the learner successfully attain the outcomes?

YES

Area of a Parallelogram

Sc 1



Sc 3/4 Area = Base x Height

$$\begin{aligned} 1. \quad B &= 9\text{cm} \quad H = 6\text{cm} \\ A &= B \times H \\ &= 9 \times 6 \\ &= 54\text{cm}^2 \end{aligned}$$

$$\begin{aligned} 2. \quad B &= 5\text{m} \quad H = 7\text{m} \\ A &= B \times H \\ &= 5 \times 7 \\ &= 35\text{m}^2 \end{aligned}$$