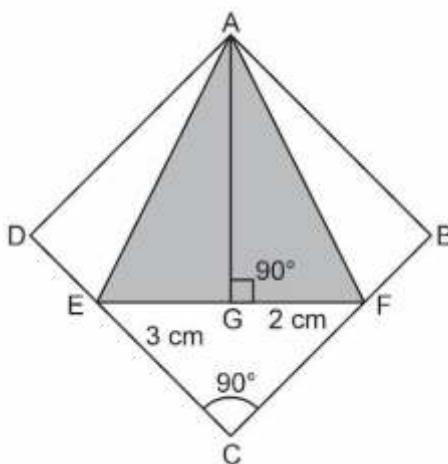# Curriculum Aligned Assessment Items
Mathematical Literacy
Class 9 – Chapter 7
Triangles

In the given figure, ΔAFB ≅ ΔAFG, ΔADE ≅ AGE and ∠EAF = 45°.

SAS21M10S0701

1 What is the measure of ∠DAB?

A. 60°
B. 90°
C. 120°
D. 135°

SAS21M10S0702

2 What is the length of AD?

_____

_____

SAS21M10S0703

3   What is the area of the shaded region?

  A. $12.5\,cm^2$
  B. $15\,cm^2$
  C. $20\,cm^2$
  D. $36\,cm^2$

In the given figure, the isosceles triangle ABC $\cong$ EAD. The point E is equidistant from both A and B.
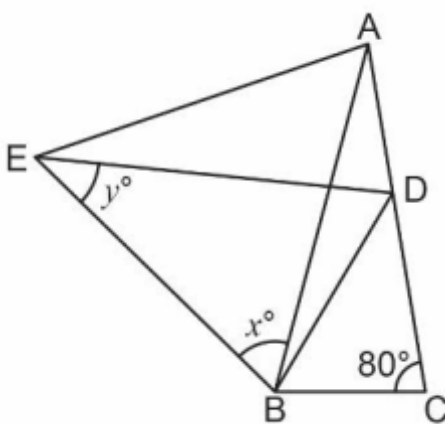
SAS21M09S0704

4   What is the value of x?

  A. $40°$
  B. $60°$
  C. $70°$
  D. $80°$

SAS21M09S0705

5   What is the value of y?

_____

_____

SAS21M09S0706

6   What is the value of $\angle BDC$?

  A. $30°$
  B. $40°$
  C. $50°$
  D. $70°$

The picture below shows a staircase outside a house. Each step of the staircase is congruent and there are 25 steps in the staircase from the floor to the platform and 25 steps from the platform to the roof.
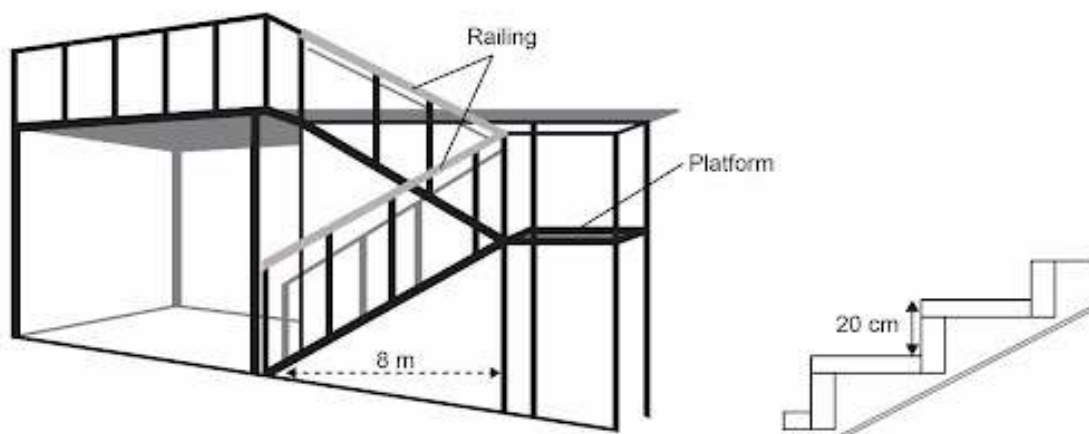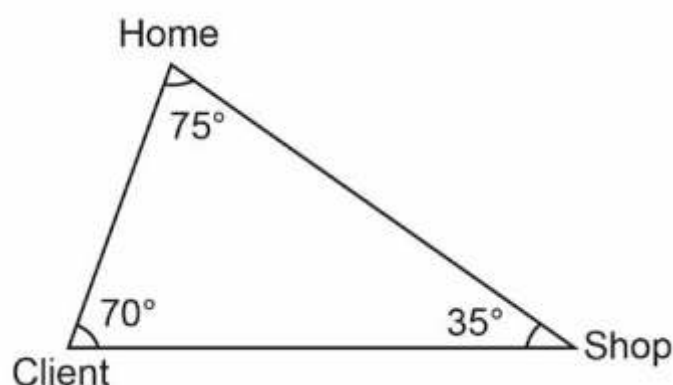

SAS21M09S0707

7 What is the length of the staircase railing?

_____

_____

In a toy game, a robot starts from Home, picks an object from the Shop, delivers it to the Client and goes back Home.

SAS21M09S0708

8 Which is the longest segment of the path travelled by the robot? Write the correct words.

_____ to _____

9   Rita says, 'For two triangles to be congruent, any three parameters of the six (3 sides and 3 angles) should be equal.'
    Give examples in favour of and against her statement.

    _____

    _____

10 'Two triangles with a pair of equal angles are congruent.'
    Why is it necessary to have the side between the two angles be of the same length for both the triangles?

    _____

    _____

Answers

Item Number	
Question Code	SAS21M09S0701
Grade & Chapter Name	Grade 9 | Triangles
Concept | Sub-concept	Geometry/Triangles | Congruence of Triangles
Competency	Employ
Item Type	Multiple Choice Question
Full Credit (Full Score)	B. 90°
No Credit (No Score)	Any other response or missing response

Item Number	Question 2
Question Code	SAS21M09S0702
Grade & Chapter Name	Grade 9 | Triangles
Concept | Sub-concept	Geometry/Triangles | Congruence of Triangles
Competency	Employ
Item Type	Closed Constructed Response
Full Credit (Full Score)	6 6 cm
No Credit (No Score)	Any other response or missing response

Item Number	Question 3
Question Code	SAS21M09S0703
Grade & Chapter Name	Grade 9 | Triangles
Concept | Sub-concept	Geometry/Triangles | Congruence of Triangles
Competency	Interpret & Evaluate
Item Type	Multiple Choice Question
Full Credit (Full Score)	B. 15 cm^2
No Credit (No Score)	Any other response or missing response

Item Number	Question 4
Question Code	SAS21M09S0704
Grade & Chapter Name	Grade 9 | Triangles
Concept | Sub-concept	Geometry/Triangles | Congruence of Triangles
Competency	Interpret & Evaluate
Item Type	Multiple Choice Question
Full Credit (Full Score)	B. 60°
No Credit (No Score)	Any other response or missing response

Item Number	Question 5
Question Code	SAS21M09S0705
Grade & Chapter Name	Grade 9 | Triangles
Concept | Sub-concept	Geometry/Triangles | Congruence of Triangles
Competency	Employ
Item Type	Closed Constructed Response
Full Credit (Full Score)	40 40°
No Credit (No Score)	Any other response or missing response

Item Number	Question 6
Question Code	SAS21M09S0706
Grade & Chapter Name	Grade 9 | Triangles
Concept | Sub-concept	Geometry/Triangles | Congruence of Triangles
Competency	Interpret & Evaluate
Item Type	Multiple Choice Question
Full Credit (Full Score)	A. 30°
No Credit (No Score)	Any other response or missing response

Item Number	Question 7
Question Code	SAS21M09S0707
Grade & Chapter Name	Grade 9 | Triangles
Concept | Sub-concept	Geometry/Triangles | Congruence of Triangles
Competency	Formulate
Item Type	Closed Constructed Response
Full Credit (Full Score)	$2\sqrt{89}$ m
No Credit (No Score)	Any other response or missing response

Item Number	Question 8
Question Code	SAS21M09S0708
Grade & Chapter Name	Grade 9 | Triangles
Concept | Sub-concept	Geometry/Triangles | Congruence of Triangles
Competency	Employ
Item Type	Closed Constructed Response
Full Credit (Full Score)	Shop, Client Client, Shop
No Credit (No Score)	Any other response or missing response

Item Number	Question 9
Question Code	SAS21M09S0709
Grade & Chapter Name	Grade 9 | Triangles
Concept | Sub-concept	Geometry/Triangles | Congruence of Triangles
Competency	Interpret & Evaluate
Item Type	Closed Constructed Response
Full Credit (Full Score)	Valid mathematical argument including criteria of congruent triangles. ⦁ Example in favour: Side-Side-Side and Angle-Side-Angle criteria ⦁ Example against: Side-Angle-Angle and Angle-Angle-Angle criteria
No Credit (No Score)	Any other response or missing response

Item Number	Question 10
Question Code	SAS21M09S0710
Grade & Chapter Name	Grade 9 | Triangles
Concept | Sub-concept	Geometry/Triangles | Congruence of Triangles
Competency	Employ
Item Type	Closed Constructed Response
Full Credit (Full Score)	Valid mathematical argument including the construction of triangles and a counter example showing that only angles are not sufficient criteria for determining congruence of triangles. ⦁ When specified angles are drawn at two endpoints of a line segment, they meet at a unique point. If side length and end angles are provided, they will make unique triangles. ⦁ All equilateral triangles are not congruent but have equal angles.
No Credit (No Score)	Any other response or missing response