High School Mathematics Test 2013

Year 7

Perimeter

Non Calculator Section

Name_____

Skills and Knowledge Assessed:

- Find perimeters and areas of parallelograms, trapeziums, rhombuses and kites (ACMMG196)
- Investigate the relationship between features of circles such as circumference, area, radius and diameter. Use formulas to solve problems involving circumference and area (ACMMG197)

Answer all questions in the spaces provided on this test paper by:

Writing the answer in the box provided.

or

Shading in the bubble for the correct answer from the four choices provided.

Show any working out on the test paper.

1. What is the perimeter of a square whose side measures 45 cm?

☐ 90cm ☐ 135 cm ☐ 180 cm ☐ 360 cm

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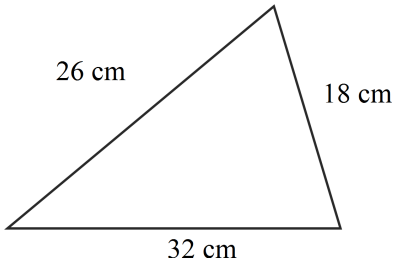
2. What is the perimeter of the triangle shown?

Perimeter = ☐ cm



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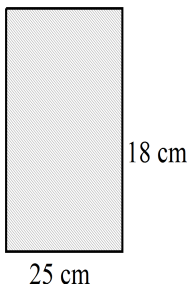
3. A rectangle measures 18 cm by 25 cm. What is the perimeter of the field?

Perimeter = ☐ metres



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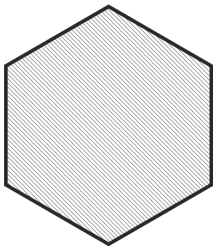
4. Jake measures one side of a regular hexagon to be 16 cm. What is its perimeter?

☐ 32 cm

☐ 48 cm

☐ 64 cm

☐ 96 cm



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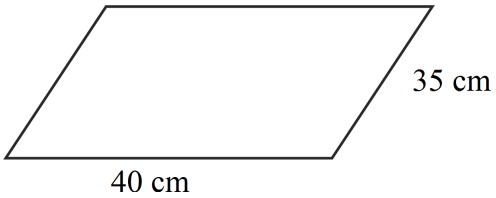
5. What is the perimeter of the parallelogram shown?

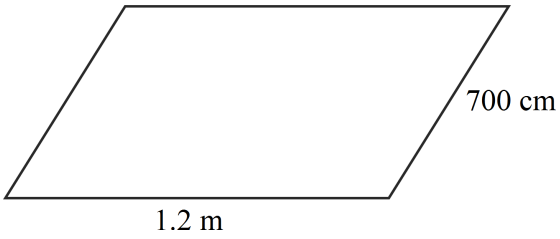
☐ 150 cm ☐ 160 cm

☐ 300 cm ☐ 450 cm



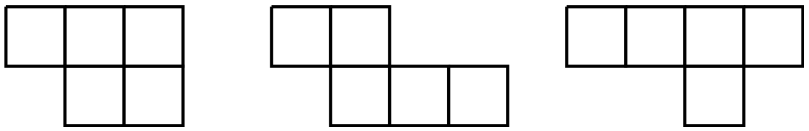
6. What is the perimeter of the parallelogram (in metres)?

Perimeter = ☐ m



7. The three shapes below are each made using five 1 cm square tiles.
Which statement below is true?

Shape 1 Shape 2 Shape 3



☐ All three shapes have the same perimeter.

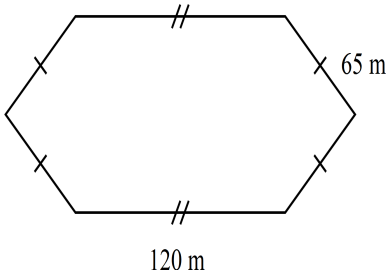
☐ Shape 1 and Shape 2 have the same perimeter.

☐ Shape 1 and Shape 3 have the same perimeter.

☐ Shape 2 and Shape 3 have the same perimeter.

8. What is the perimeter of the shape shown?

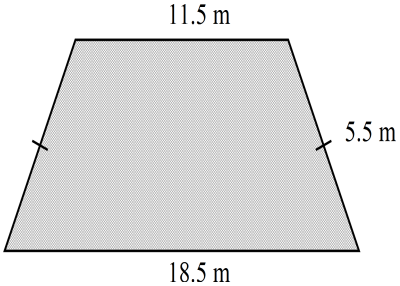
Perimeter = ☐ m.



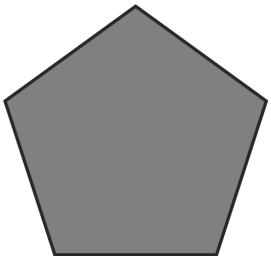
9. The trapezoidal garden bed is to be edged with a metal border. What length of metal edging is needed for the bed?

☐ 30.0 m ☐ 35.5 m

☐ 41.0 m ☐ 46.5 m

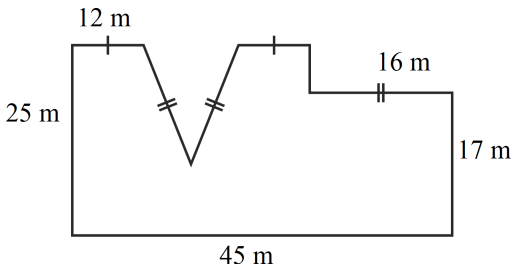


10. A regular pentagon has a perimeter of 120 m.
How long is each side?



☐ m

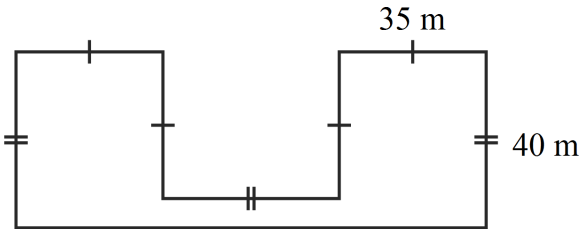
11. What is the perimeter of the irregular polygon shown?



☐ 123 m ☐ 135 m

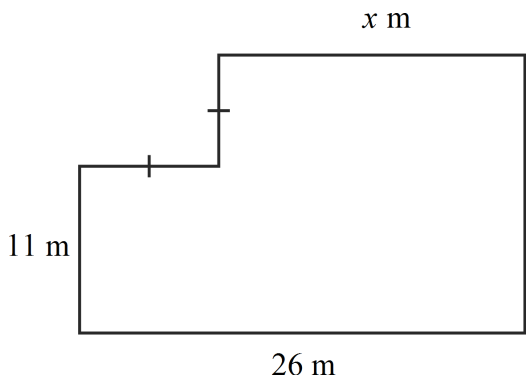
☐ 167 m ☐ 179 m

12. What is the perimeter of the shape shown?



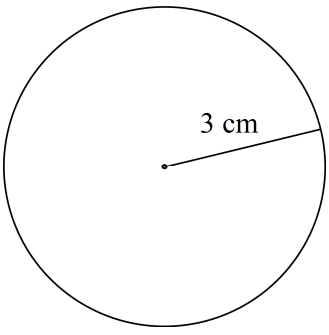
Perimeter = ☐ m

13. The perimeter of this shape is 88 m.
What is the value of x?



x = ☐ m

14. What is the circumference of the circle shown?
Use $\pi = 3.1$

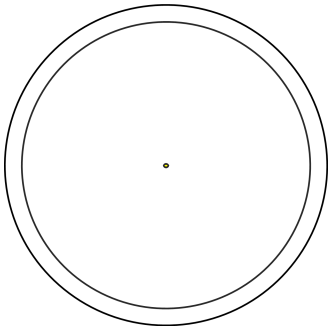


Circumference = ☐ cm

15. A park has a circular pond with outside diameter 16 m.

Suzie walks from one side of the pond, around the edge, to the opposite side.

How far does she walk (in terms of π)?



- ☐ 4π m
- ☐ 8π m
- ☐ 12π m
- ☐ 16π m

High School Mathematics Test 2013

Year 7

Perimeter

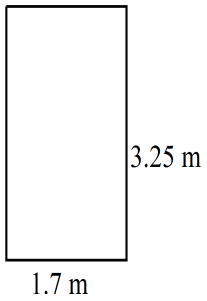
Calculator Allowed Short Answer Section

Name_____

Answer all questions in the spaces provided on this test paper by:
Writing the answer in the box provided.
or
Shading in the bubble for the correct answer from the four choices provided.
Show any working out on the test paper. Calculators are allowed.

1. A rectangular field measures 1.7 metres by 3.25 metres. What is the perimeter of the field?

Perimeter = ☐ m



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2. What is the perimeter of an equilateral triangle with base 1.62 metres?

☐ 1.62 m ☐ 3.24 m ☐ 4.86 m ☐ 6.48 m

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3. Alan measures one side of a rhombus to be 1.25 metres. What is the perimeter of the rhombus (correct to the nearest cm)?

☐ 1.56 m ☐ 2.50 m ☐ 3.75 m ☐ 5.00 m

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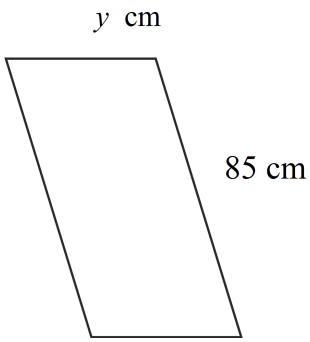
4. A canvas is to be in the shape of a parallelogram as shown.
Its perimeter is 3 metres.
One edge of the canvas measures 85 cm.
How long is the other edge (marked y)?

y = ☐ cm



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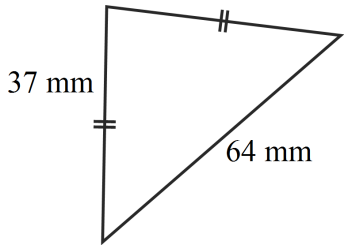
5. What is the perimeter of the triangle shown?

☐ 74 mm ☐ 101 mm

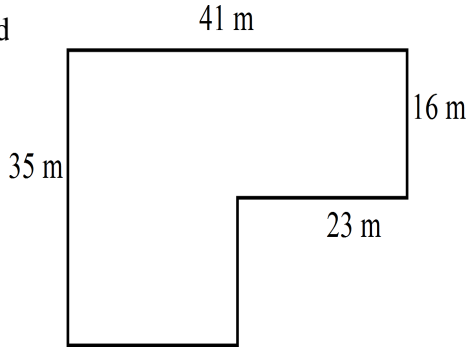
☐ 138 mm ☐ 165 mm



6. What is the perimeter of the irregular block of land shown?

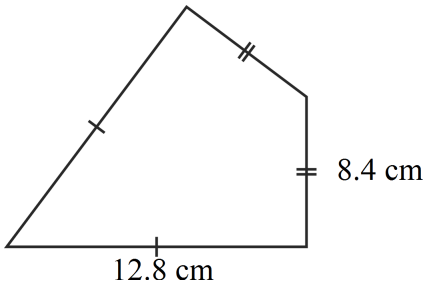
☐ 115 m ☐ 138 m

☐ 152 m ☐ 161 m



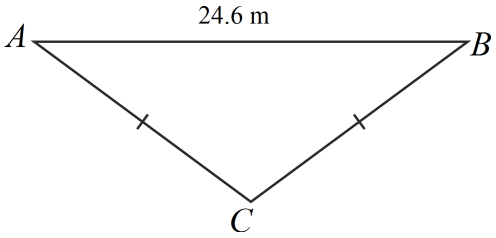
7. Find the perimeter of this kite.

Perimeter = ☐ cm



8. The isosceles triangle ABC has a perimeter of 58.2 cm.
What is the length of AC?

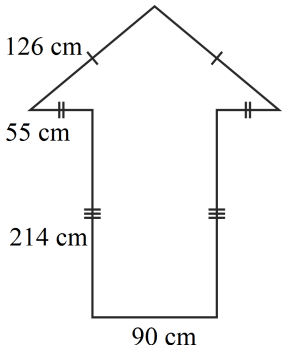
$AC =$ ☐ cm



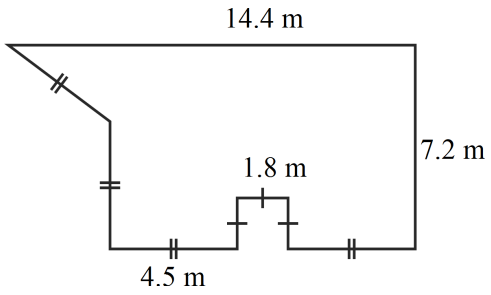
9. A sign is made in the shape of an arrow as shown.
What is the perimeter of the sign?

☐ 485 cm ☐ 699 cm

☐ 754 cm ☐ 880 cm

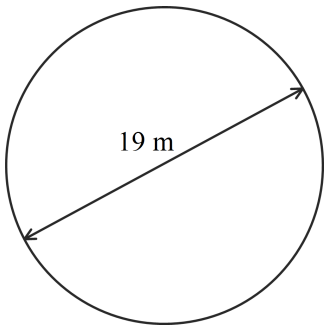


10. Find the perimeter of the irregular field shown.



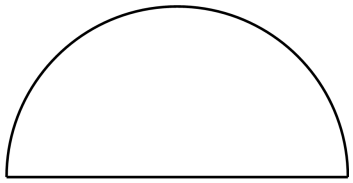
Perimeter = ☐ m

11. What is the perimeter of the circle shown?
(Answer correct to one decimal place.)
Use $\pi = 3.14$



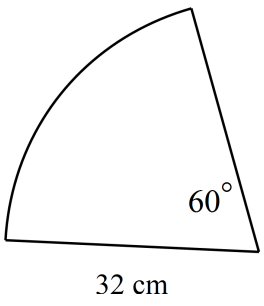
Circumference = ☐ m

12. What is the perimeter of the semicircle shown?
Use $\pi = 3.14$



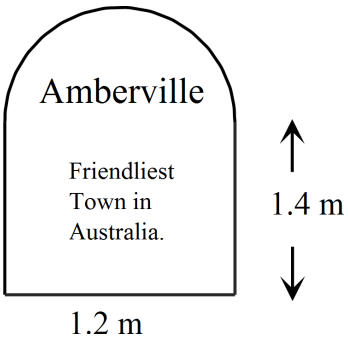
☐ 30.84 cm ☐ 37.68 cm
☐ 49.68 cm ☐ 87.36 cm

13. A sector of a circle is shown. What is its perimeter, correct to one decimal place?
Use $\pi = 3.14$



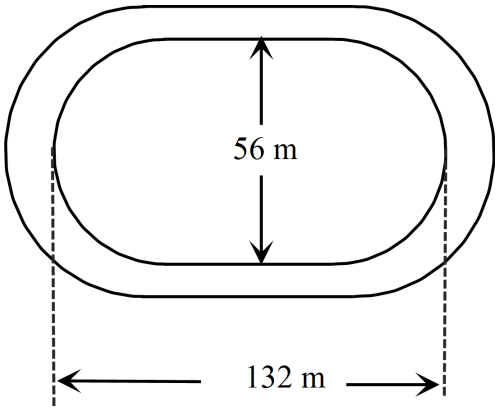
☐ 33.5 cm ☐ 48.7 cm
☐ 65.5 cm ☐ 97.5 cm

14. A sign is made of wood with a strip of metal around the edge. What is the length of metal needed for the sign (Correct to one decimal place)? Use $\pi = 3.14$



_____ m.

15. A trotting track has the dimensions shown. What is the distance travelled in making one lap of the track on the inside rail? To the nearest m. Use $\pi = 3.14$



_____ m.

High School Mathematics Test 2013

Year 7

Perimeter

ANSWERS

Non Calculator Section

1.	180 cm
2.	76 cm
3.	86 cm
4.	96 cm
5.	150 cm
6.	16.4 m
7.	Shape 2 and Shape 3 have the same perimeter.
8.	500 cm

9.	41.0 m
10.	24 m
11.	167 m
12.	370 m
13.	19 m
14.	18.6 cm
15.	8π m

Calculator Allowed Section

1.	9.9 m
2.	4.86 m
3.	5.00 m
4.	$x = 65$ cm
5.	138 mm
6.	152 m
7.	42.4 cm
8.	16.8 cm

9.	880 cm
10.	45.0 cm
11.	59.7 m
12.	30.84 cm
13.	97.5 cm
14.	5.9 m
15.	327.93m