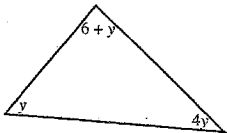


Name: _____

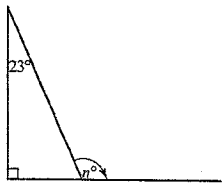
PART A: Multiple choice

1 The value of the pronumeral y is:



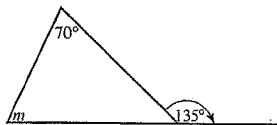
- A 51°
- B 44°
- C 32°
- D 29°

2 The value of the pronumeral n is:



- A 23°
- B 67°
- C 113°
- D 167°

3 The value of the pronumeral m is:



- A 135°
- B 90°
- C 70°
- D 65°

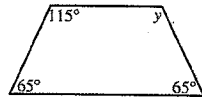
4 A quadrilateral with all sides equal in length is called a:

- A rectangle
- B parallelogram
- C square
- D kite

5 A quadrilateral with two pairs of adjacent sides equal is called a:

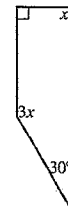
- A trapezium
- B parallelogram
- C square
- D kite

6 The value of the pronumeral y is:



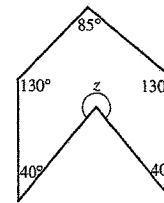
- A 65°
- B 115°
- C 130°
- D 230°

7 The value of the pronumeral x is:



- A 30°
- B 45°
- C 60°
- D 80°

Questions 8 and 9 refer to the following diagram.



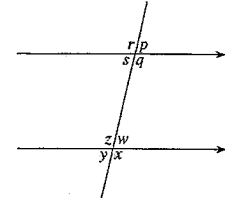
8 The sum of the angles in the polygon is:

- A 540°
- B 720°
- C 900°
- D 1080°

9 The value of the pronumeral z is:

- A 425°
- B 85°
- C 115°
- D 295°

Questions 10 and 11 refer to the following diagram.



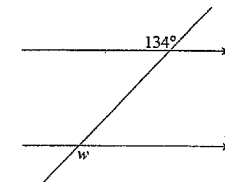
10 State which angle is co-interior to angle s .

- A p
- B w
- C z
- D y

11 The angle which is vertically opposite to r is:

- A p
- B w
- C q
- D z

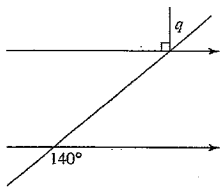
12



The value of the pronumeral w is:

- A 44°
- B 56°
- C 134°
- D 150°

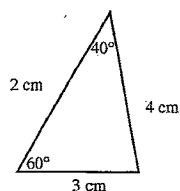
13



The value of the pronumeral q is:

- A 45°
- B 50°
- D 120°
- E 140°

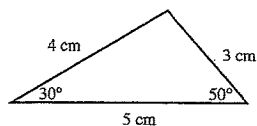
14



The shape above is best described as:

- A a triangle with angles 60° and 40° and side between them of length 2 cm
- B a triangle with angles 60° and 60° and side between them of length 4 cm
- C a triangle with angles 40° and 80° and side between them of length 3 cm
- D a triangle with angles 40° and 40° and side between them of length 4 cm

15



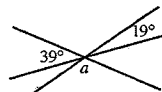
The shape above is best described as:

- A a triangle with side lengths 4 cm and 3 cm with an angle 50° between them
- B a triangle with side lengths 3 cm and 5 cm with an angle 30° between them
- C a triangle with side lengths 5 cm and 5 cm with an angle 50° between them
- D a triangle with side lengths 4 cm and 5 cm with an angle 30° between them

16 The value of the angle which is *complementary* to 23° is:

- A 130°
- B 157°
- C 67°
- D 3°

17 The value of the angle a in the figure below is:

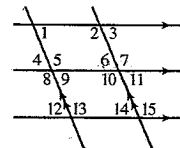


- A 58°
- B 32°
- C 19°
- D 122°

18 Supplementary angles:

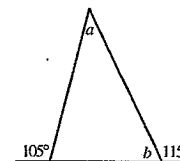
- A add up to 90 degrees
- B add up to 180 degrees
- C are not equal
- D are co-interior angles

19 Two angles which are *co-interior* to angle 9 in the figure below are:



- A Angles 5 and 8
- B Angles 5 and 1
- C Angles 6 and 14
- D Angles 1 and 13

20 The values of the angles a and b in the figure below are:

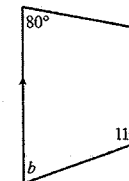


- A $a = 40^\circ, b = 65^\circ$
- B $a = 40^\circ, b = 75^\circ$
- C $a = 90^\circ, b = 65^\circ$
- D $a = 30^\circ, b = 65^\circ$

21 The sum of the interior angles of a hexagon is:

- A 360°
- B 540°
- C 720°
- D 900°

22 The values of the angles a and b in the figure below are:

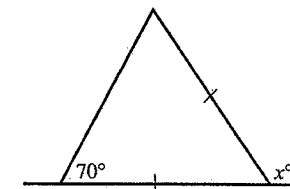


- A $a = 80^\circ, b = 110^\circ$
- B $a = 110^\circ, b = 80^\circ$
- C $a = 100^\circ, b = 70^\circ$
- D $a = 85^\circ, b = 85^\circ$

23 Angles which add up to 90° are called:

- A obtuse angles
- B reflex angles
- C complementary angles
- D supplementary angles

24 The value of x° is:

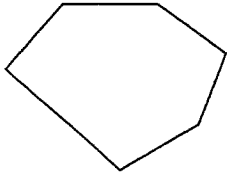


- A 40°
- B 70°
- C 120°
- D 140°

25 The size of each interior angle in a regular octagon is:

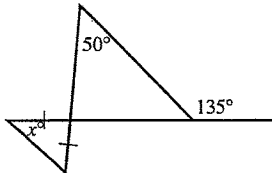
- A 108°
- B 120°
- C 135°
- D 180°

26 In the diagram shown the sum of the interior angles is equal to:



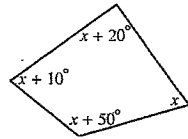
- A 540
- B 720
- C 900
- D 1080

27 The value of x° in the figure shown is:



- A 45°
- B 47.5°
- C 85°
- D 95°

28



Which of the following statements is true?

- A $x + 50^\circ = x + 20^\circ$
- B $4x + 80^\circ = 360^\circ$
- C $x = x + 10^\circ$
- D $4x = 180^\circ$

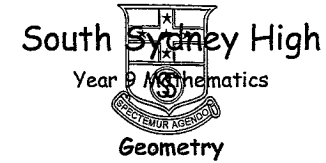
29 In which one of the following shapes are the diagonals always equal?

- A a rhombus
- B a rectangle
- C a trapezium
- D a parallelogram

30 Which of the following characteristics does not belong to a rhombus?

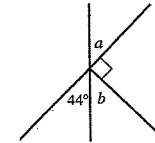
- A Diagonals intersect at 90° .
- B Opposite sides are parallel.
- C Adjacent angles add to 90° .
- D All sides are of equal length.

Name:

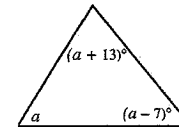


PART B: GIVE REASONS AND SHOW ALL WORKING OUT FOR EACH QUESTION

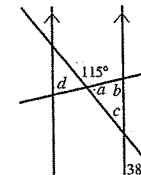
1 Find the values of the angles a and b in the figure below.



2 Determine the value of the pronumeral a in the figure below.

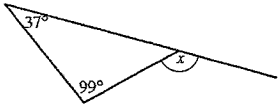


3 Find the values of the angles a , b and c as shown in the figure below.

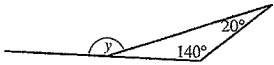


4 Find the value of the exterior angles.

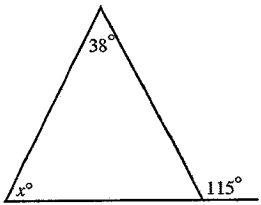
(a)



(b)



5 Find the size of the angle marked x° , giving a brief reason.



6 (a) Draw a shape with 4 sides where there is only one pair of parallel sides.

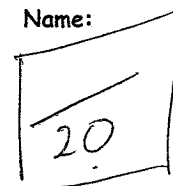
(b) How would you best describe this shape?

GEOMETRY ANSWERS PART A

- 1 D
- 2 C
- 3 D
- 4 C
- 5 D
- 6 B
- 7 C
- 8 B
- 9 D
- 10 C
- 11 C
- 12 C
- 13 B
- 14 A
- 15 D

- 16 C
- 17 D
- 18 B
- 19 D
- 20 A
- 21 C
- 22 C
- 23 C
- 24 D
- 25 C
- 26 B
- 27 B
- 28 B
- 29 B
- 30 C

Name:



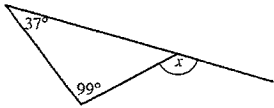
PART B: GIVE REASONS AND SHOW ALL WORKING OUT FOR EACH QUESTION

<p>1 Find the values of the angles a and b in the figure below.</p>	<p>$a = 44^\circ$ (\because Vertically opp \angle's) ✓ $b + 44 + 90 = 180$ (\because supp \angle's) ✓ $b + 134 = 180$ $b = 46^\circ$ ✓</p> <p style="text-align: right;">(3)</p>
<p>2 Determine the value of the pronumeral a in the figure below.</p>	<p>$a + a + 13 + a - 7 = 180^\circ$ (\because \angle sum of $\Delta = 180^\circ$) ✓ $\therefore 3a + 6 = 180^\circ$ ✓ $3a = 174$ $a = 58^\circ$ ✓</p> <p style="text-align: right;">(3)</p>
<p>3 Find the values of the angles a, b and c as shown in the figure below.</p>	<p>$a + 115 = 180^\circ$ (\because supp \angle's) ✓ $\therefore a = 65^\circ$ ✓ $c = 38^\circ$ (\because Vert opp \angle's) ✓ $b + a + c = 180^\circ$ (\because \angle sub of Δ) ✓ $b + 65 + 38 = 180$ $b + 103 = 180^\circ$ $\therefore b = 77^\circ$ ✓</p> <p style="text-align: right;">(6)</p>

$d = b = 77^\circ$ (\because alt \angle 's) ✓

4 Find the value of the exterior angles.

(a)



$$x = 37 + 99 \quad (\because \text{Ext } \angle \text{ of } \Delta = \text{sum of 2 opp int}) \checkmark$$

$$x = 136^\circ \checkmark$$

(b)

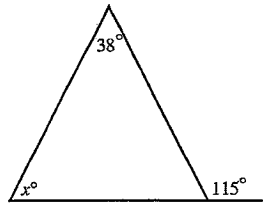


$$y = 140 + 20 \quad (\because \text{Ext } \angle \text{ of } \Delta = \text{sum of 2 opp int}) \checkmark$$

$$\therefore y = 160$$

(4)

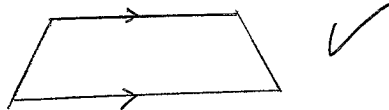
5 Find the size of the angle marked x° , giving a brief reason.



$$x + 38 = 115 \quad (\because \text{Ext } \angle \text{ of } \Delta = \text{sum of 2 opp int}) \checkmark$$

$$\therefore x = 77^\circ \checkmark \quad (2)$$

6 (a) Draw a shape with 4 sides where there is only one pair of parallel sides.



(2)

(b) How would you best describe this shape?

TRAPEZIUM \checkmark