Year 7 Mathematics
Mini Test

Baldivis Secondary College

Angles and Triangles

Resource Section: one A4 page of notes and calculator allowed

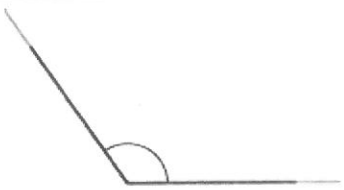
Time: 45 mins Name: Anne Sirs / 40 marks

Full working out must be shown to get full marks. Attempt all the questions.

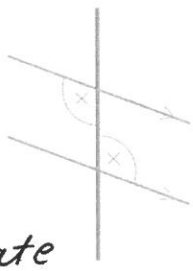
Part A — 14 marks

Question 1: Correctly label the type of angles, angle relationships, triangles and shapes. **6 marks**

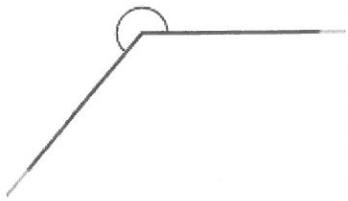
Equilateral Triangle, Angles at a Point, Obtuse Angle, Complementary Angles, Alternate Angles, Reflex Angle.

a. 

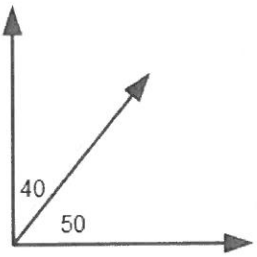
Answer: Abtuse

b. 

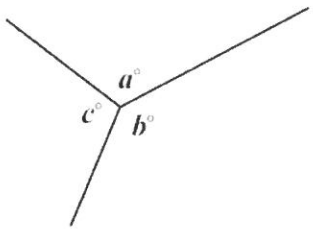
Answer: Alternate

c. 

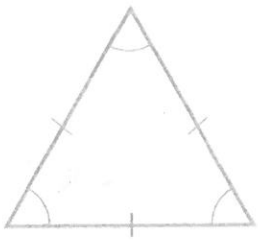
Answer: Reflex

d. 

Answer: Complementry

e. 

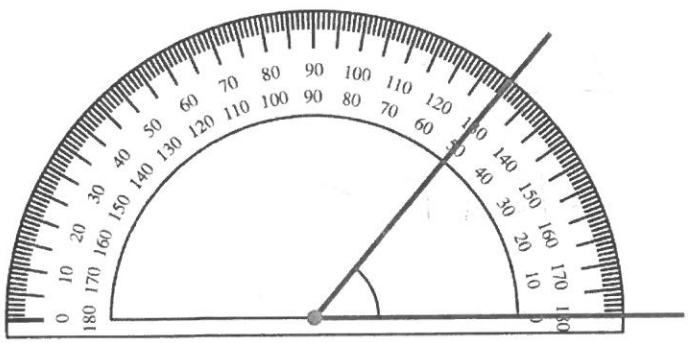
Answer: Angles at a point

f. 

Answer: Equilateral

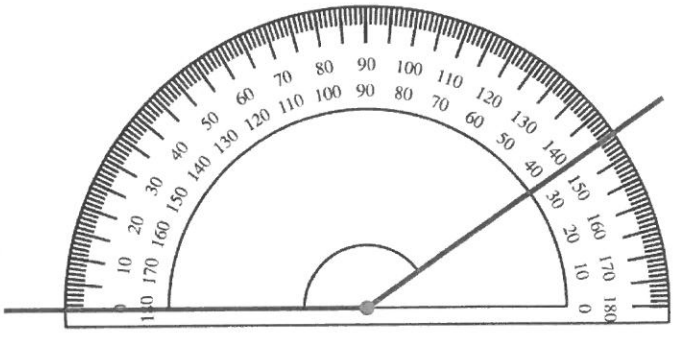
Question 2: Measure the following angles and give the answer in degrees °. **2 marks**

a.



Answer: 50°

b.



Answer: 145°

lose ½ if they dont have (°)

/8

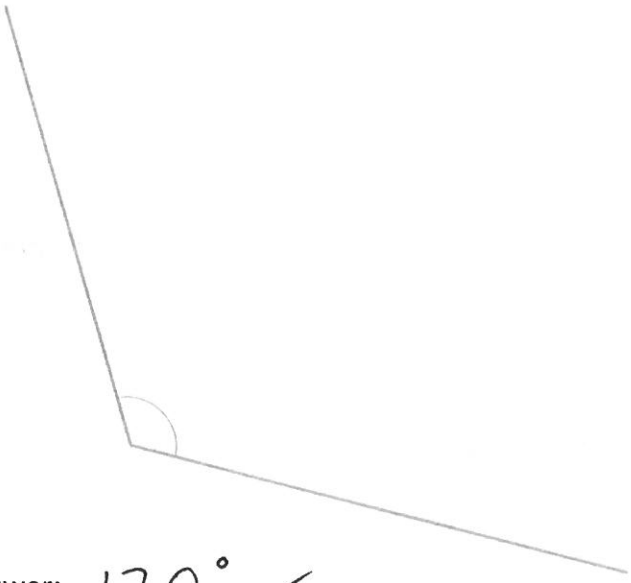
Question 3: Using your protractor, measure the following angles and give the answer in degrees °.

3 marks

a.

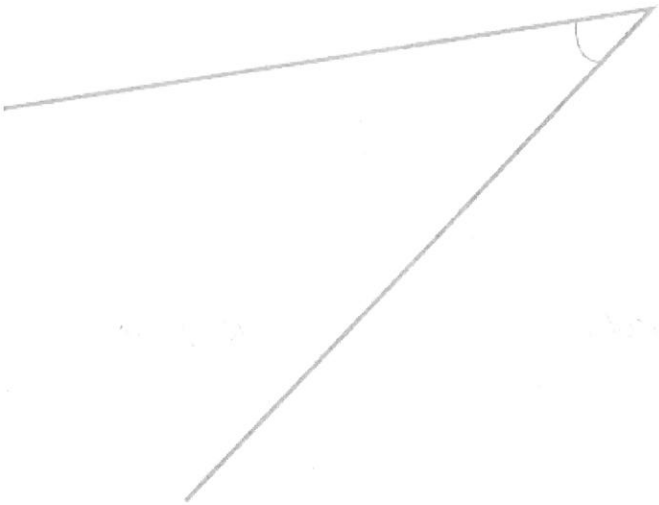
Answer: 85° ✓

b.



Answer: 120° ✓

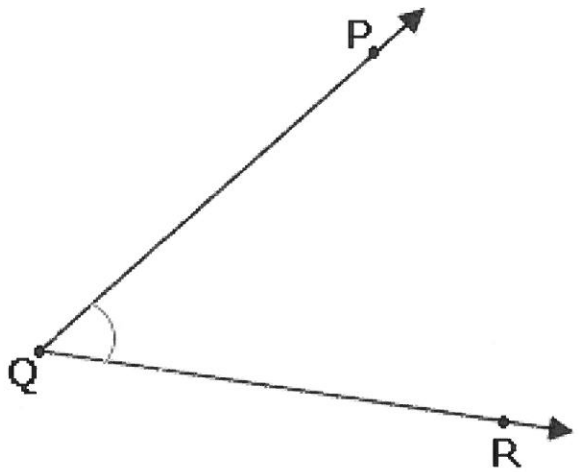
c.



Answer: 38° ✓

Question 4: List <u>all three possible names</u> for the following angle.

3 marks



∠PQR ✓

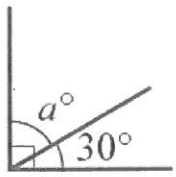
∠Q ✓

∠RQP ✓

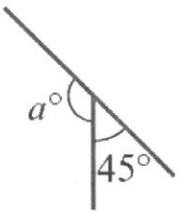
Part B — 12 marks

Question 5: Without using a protractor, find the size of each angle marked with the letter a°. (The diagrams shown may not be drawn to scale) **4 marks**

a. Answer: 60°

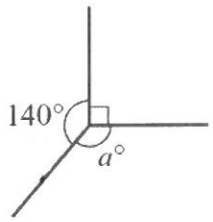


b. Answer: 135°



c. Answer: 115°

d. Answer: 130°



Question 6: **6 marks**

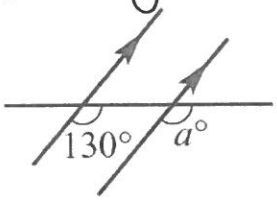
i. Find the value of a° in these diagrams. <u>Don't forget to include the degrees (°).</u>

ii. Name the angle relationship.

a.

i. 130°

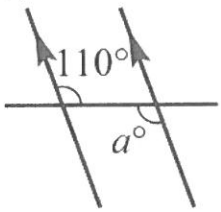
ii. Corresponding



b.

i. 110°

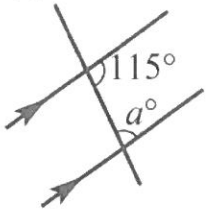
ii. Alternate



c.

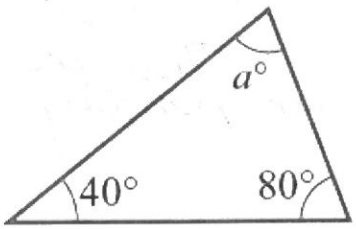
i. 65°

ii. Co-Interior



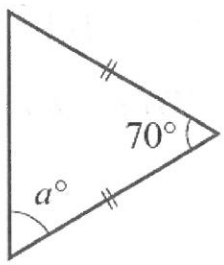
Question 7: Find the unknown angle a° in each of the following triangles. **2 marks**

a.



Answer: 60°

b.



Answer: 55°

12

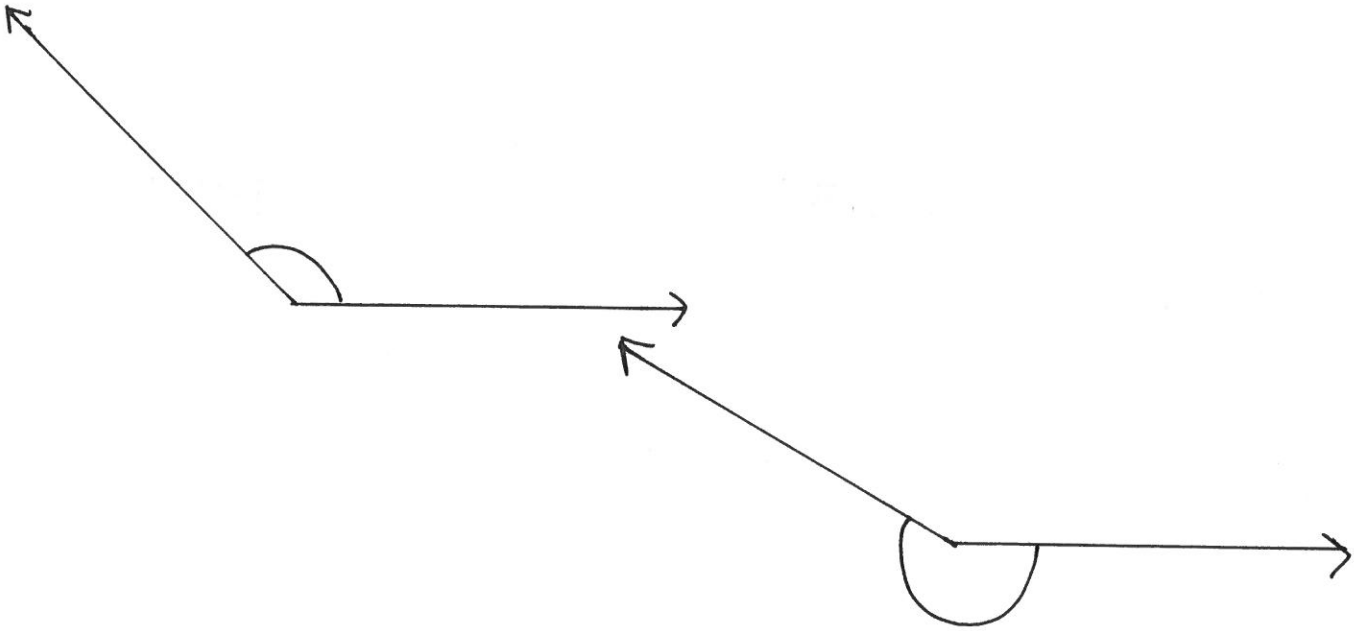
Part C

10 marks

Question 8: Use a protractor and draw the following angles. **2 marks**

a. 135°

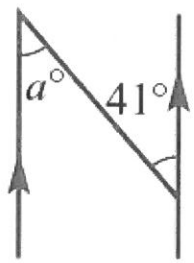
b. 210°



Question 9: Find the values of a° and x° in the diagrams. Give a mathematical reason for your answer.

8 marks

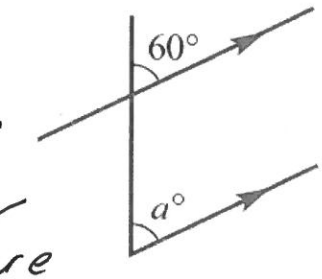
a.



41° ✓

Answer: The angles are Alternate angles. ✓

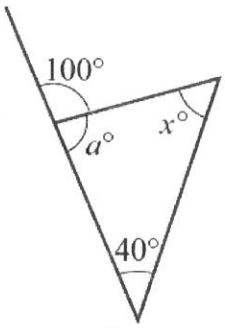
b.



60° ✓ ✓

Answer: They are corresponding angles.

c.



$a° = 80°$ ✓

$x° = 60°$ ✓

✓ ✓

Answer: $a° = 80°$ because they are supplementary.
$x° = 60°$ because all angles in a triangle equal 360°.

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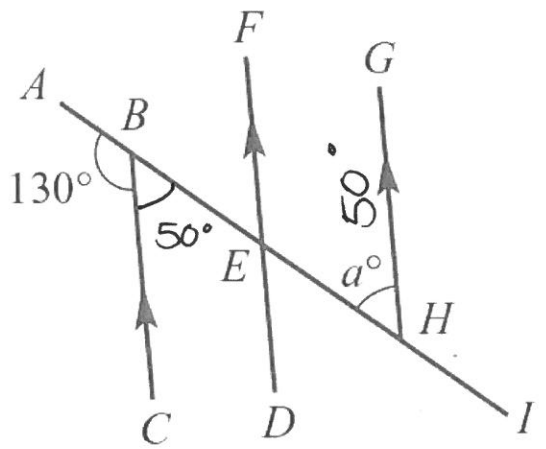
Part D

4 marks

Question 10: Find a° in the following diagrams. Give a mathematical reason as to how you got your answer.

4 marks

a.

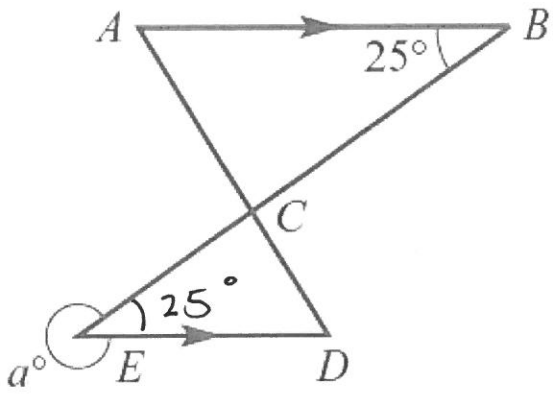


$a° = 50°$ ✓

✓

Answer: ~~To~~ Supplementry angles add up to 180°. Angle a° is Alternate to the 50° angle.

b.



$a° = 360 - 25$ ✓

$= 335°$ ✓

Answer: 25° angles are Alternate ~~reflex angle~~ Circle adds up to 360 so a° is 360-25°.

End of Test

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