

CBSE CLASS 6 MATHEMATICS

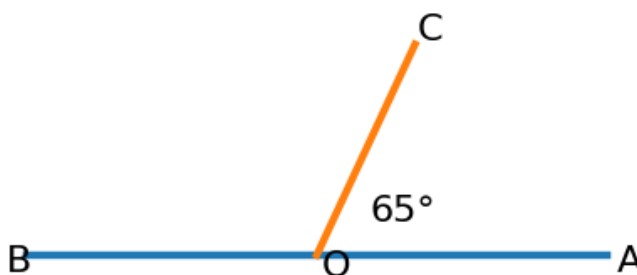
LINES AND ANGLES WORKSHEET

Name: _____	Class: _____	Date: _____	Score: _____
-------------	--------------	-------------	--------------

Instructions: Show your working. Use a ruler and protractor carefully. Draw neat, labelled figures.

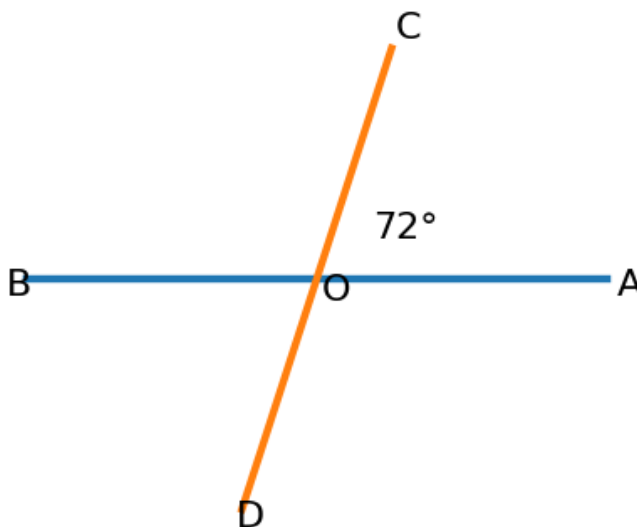
1. Find the Missing Angle

1. Find $\angle BOC$. Given $\angle COA = 65^\circ$. (Linear pair)



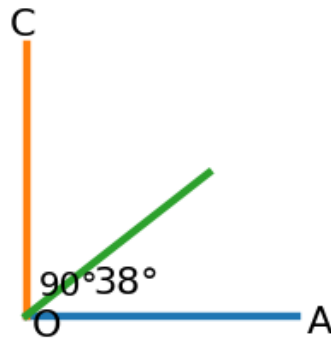
Answer: _____

2. Find $\angle BOD$. Given $\angle COA = 72^\circ$. (Vertically opposite angles)



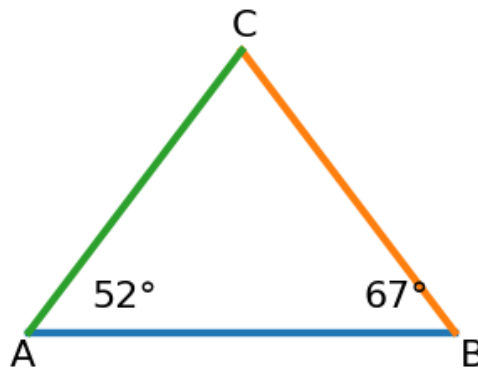
Answer: _____

3. Find the missing part of the right angle. One part is 38° .



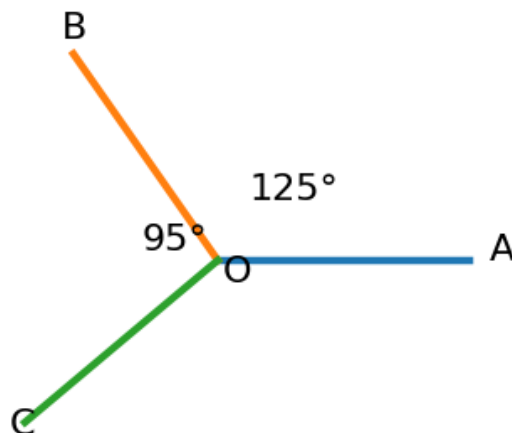
Answer: _____

4. In $\triangle ABC$, find $\angle C$. $\angle A = 52^\circ$ and $\angle B = 67^\circ$.



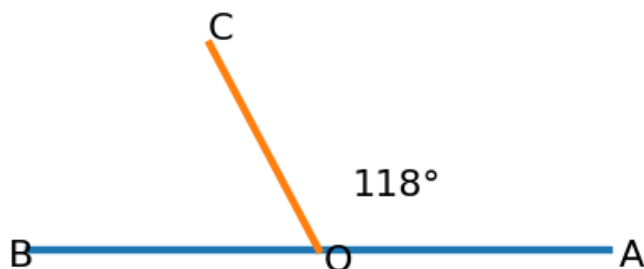
Answer: _____

5. Angles around O are 125° , 95° and x° . Find x .



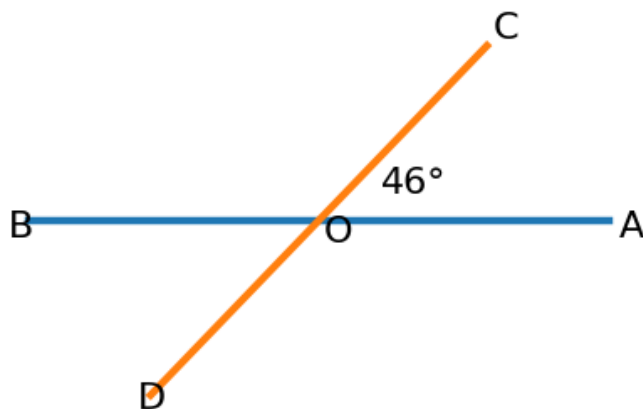
Answer: _____

6. Find the angle adjacent to 118° on the straight line.



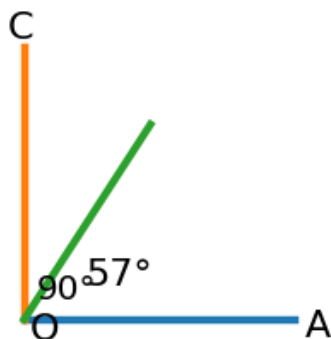
Answer: _____

7. Find the angle vertically opposite to 46° .



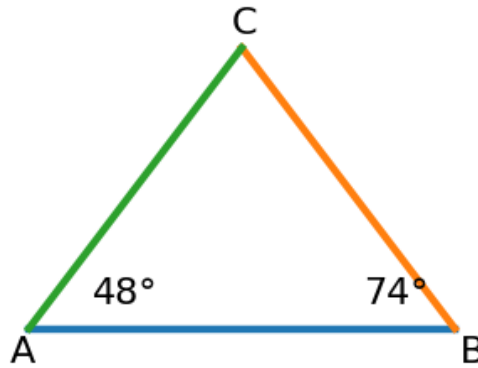
Answer: _____

8. Find the missing part of the right angle. One part is 57° .



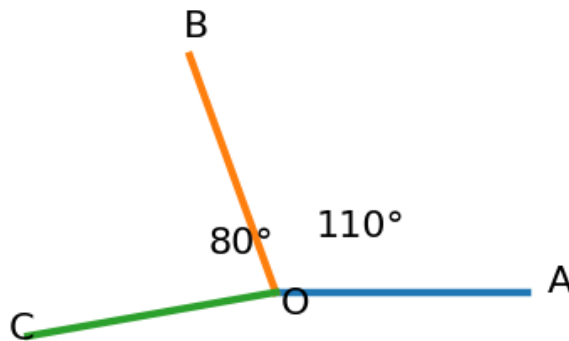
Answer: _____

9. In $\triangle ABC$, find $\angle C$. $\angle A = 48^\circ$ and $\angle B = 74^\circ$.



Answer: _____

10. Angles around O are 110° , 80° and x° . Find x.



Answer: _____

2. Draw the Angle Using a Protractor

1. Draw an angle of 37° .

Vertex: _____ Angle name: _____ Measure: _____



2. Draw an angle of 68° .

Vertex: _____ Angle name: _____ Measure: _____



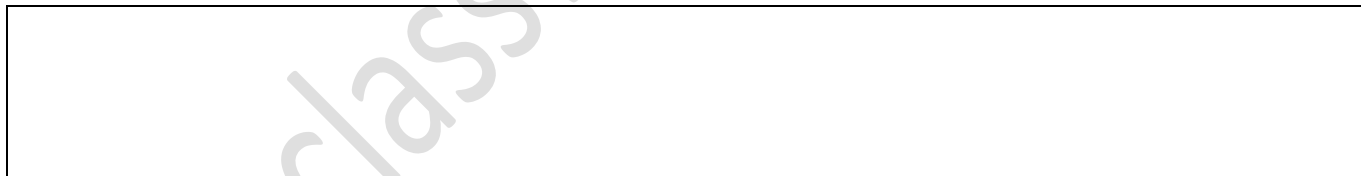
3. Draw an angle of 95° .

Vertex: _____ Angle name: _____ Measure: _____



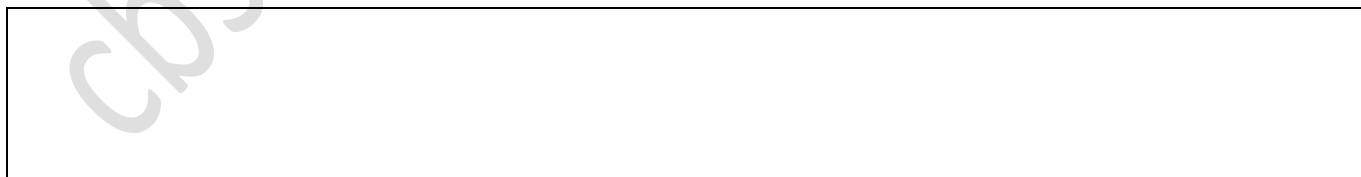
4. Draw an angle of 124° .

Vertex: _____ Angle name: _____ Measure: _____



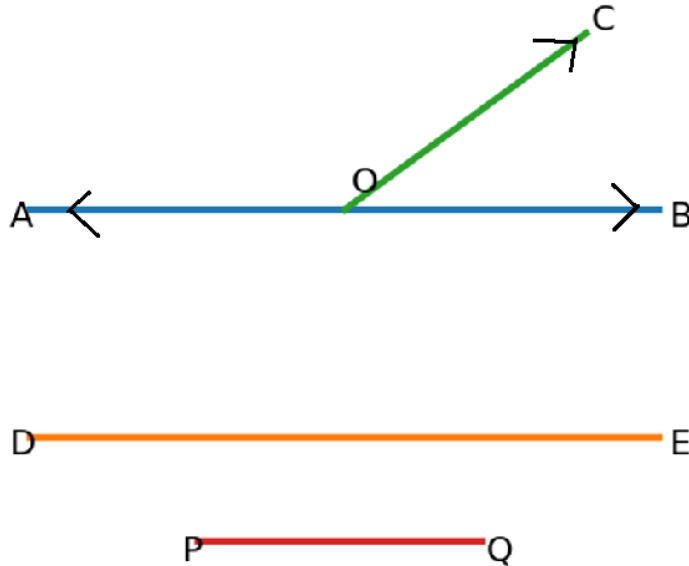
5. Draw an angle of 152° .

Vertex: _____ Angle name: _____ Measure: _____



3. Identify the Geometric Objects

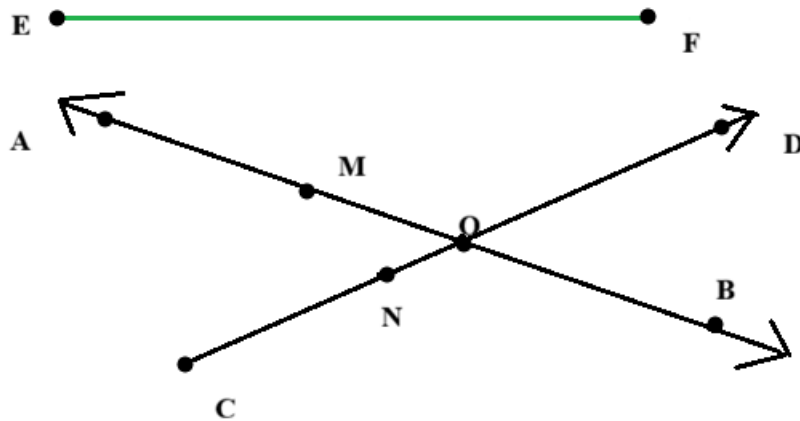
1. Study the figure and answer:



- a) Name one line. b) Name one ray. c) Name one line segment.
 d) Name the point of intersection. e) Name the pair of parallel lines.

Answers: _____

2. Study the figure and answer:



- a) Name one line segment. b) Name one ray. c) Name one line
 d) Name the point of intersection.

Answers: _____

ANSWER KEY – SOLVING STEPS**1. $\angle BOC = 115^\circ$**

Linear pair: $\angle BOC + 65^\circ = 180^\circ$. So $\angle BOC = 180^\circ - 65^\circ = 115^\circ$.

2. $\angle BOD = 72^\circ$

$\angle BOD$ and $\angle COA$ are vertically opposite. Vertically opposite angles are equal. Hence $\angle BOD = 72^\circ$.

3. Missing angle = 52°

The two parts make a right angle: $x + 38^\circ = 90^\circ$. Therefore $x = 90^\circ - 38^\circ = 52^\circ$.

4. $\angle C = 61^\circ$

Angles of a triangle add to 180° . $\angle C = 180^\circ - (52^\circ + 67^\circ) = 61^\circ$.

5. $x = 140^\circ$

Angles around a point add to 360° . $x = 360^\circ - (125^\circ + 95^\circ) = 140^\circ$.

6. Missing angle = 62°

Linear pair: $x + 118^\circ = 180^\circ$. Therefore $x = 180^\circ - 118^\circ = 62^\circ$.

7. Missing angle = 46°

Vertically opposite angles are equal. Therefore the required angle is 46° .

8. Missing angle = 33°

Right angle: $x + 57^\circ = 90^\circ$. Therefore $x = 90^\circ - 57^\circ = 33^\circ$.

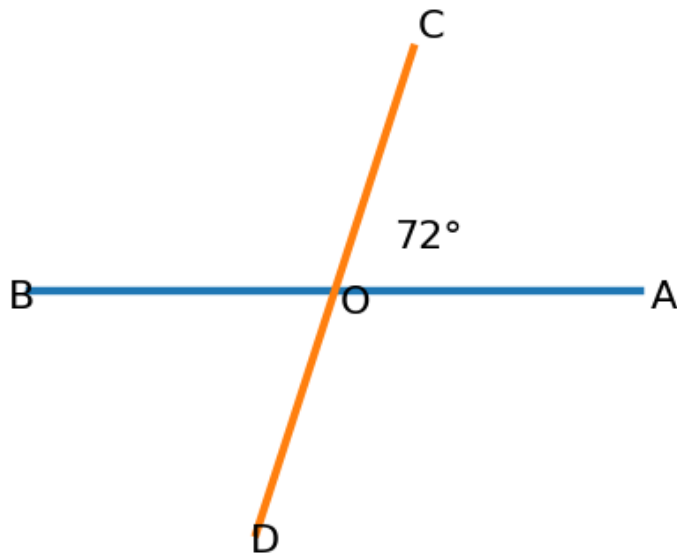
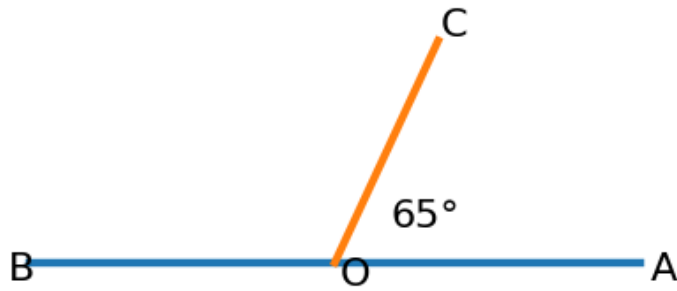
9. $\angle C = 58^\circ$

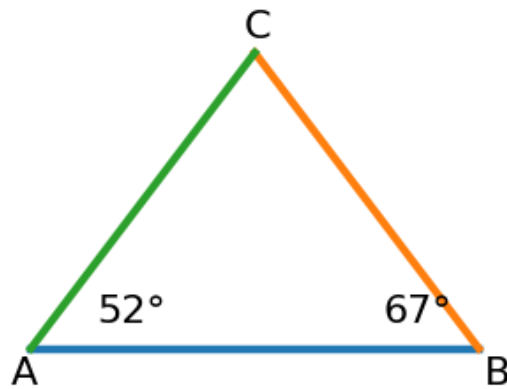
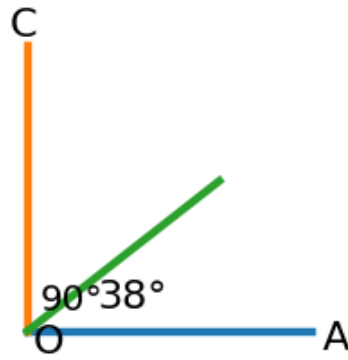
Triangle angle sum: $\angle C = 180^\circ - (48^\circ + 74^\circ) = 58^\circ$.

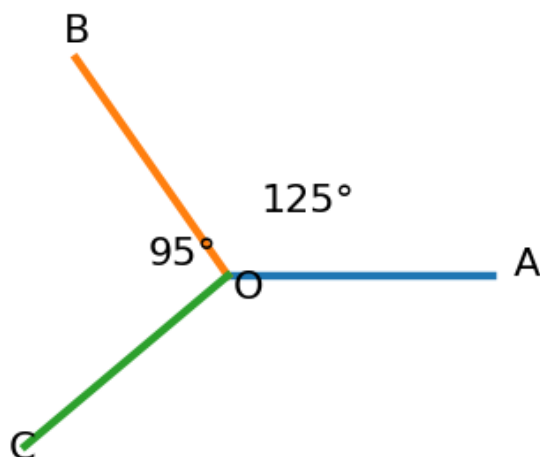
10. $x = 170^\circ$

Angles around a point: $x = 360^\circ - (110^\circ + 80^\circ) = 170^\circ$.

Geometric Figures for the Angle Solutions







Section 2 – Drawing Answers

1. 37° 2. 68° 3. 95° 4. 124° 5. 152°

The drawn angle is correct when its protractor measurement matches the stated value.

Section 3 – Identification Answers

1. Line: AB (or DE); Ray: OC; Line segment: PQ; Intersection: O; Parallel lines: $AB \parallel DE$.

2. Line: AB ; Ray: OD; Line segment: EF; Intersection: O;

Quick Revision: Linear pair = 180° | Right angle = 90° | Angles around a point = 360° | Angles of a triangle = 180° | Vertically opposite angles are equal.