

IEC

مدارس الكلية العلمية الإسلامية
Islamic Educational College
Jubeiha - Jabal Amman



Chapter: 6

Lesson title: Types of Triangles

Subject: math

Class: 10th grade



SUBJECT: Math

GRADE: 10

UNIT: 2

Lesson: 2

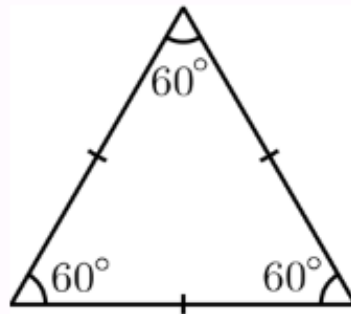
Classifying Triangles by their sides





Classifying by sides:

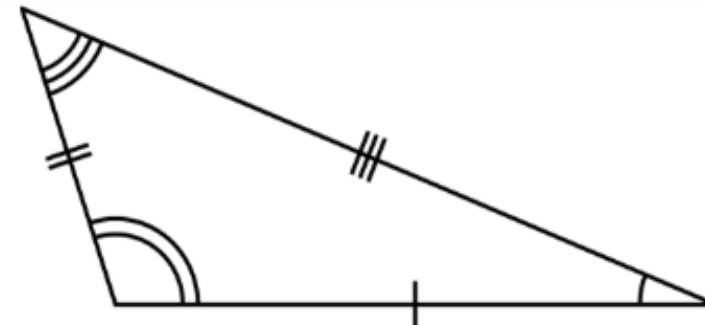
1. Equilateral Triangle.
2. Isosceles Triangle.
3. Scalene Triangle.



equilateral
triangle



isosceles
triangle



scalene
triangle



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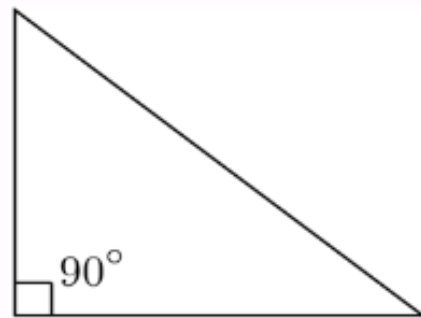
Classifying Triangles by their angles



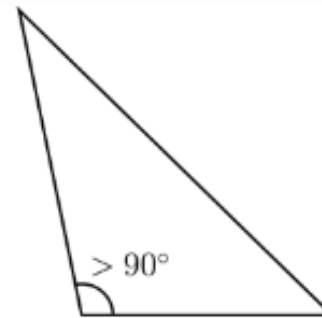


Classifying by angles:

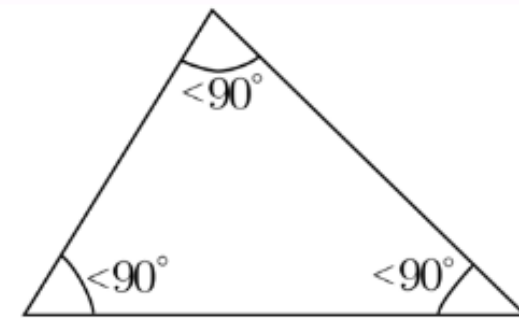
1. Acute-angled triangle.
2. Right-angled triangle.
3. Obtuse-angled triangle.



right
triangle



obtuse
triangle



acute
triangle



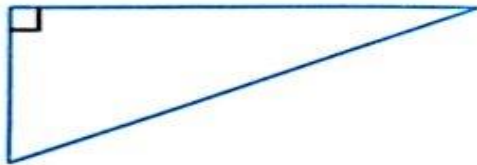
Exercise 6B page 180

Exercise 6B

Name each of the following triangles according to

- (i) the lengths of its sides,
- (ii) the sizes of its angles.

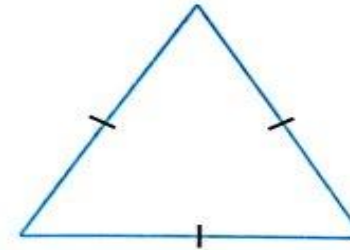
(a)



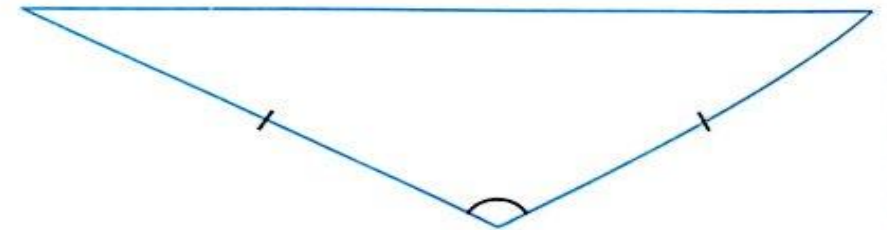
(b)



(c)



(d)



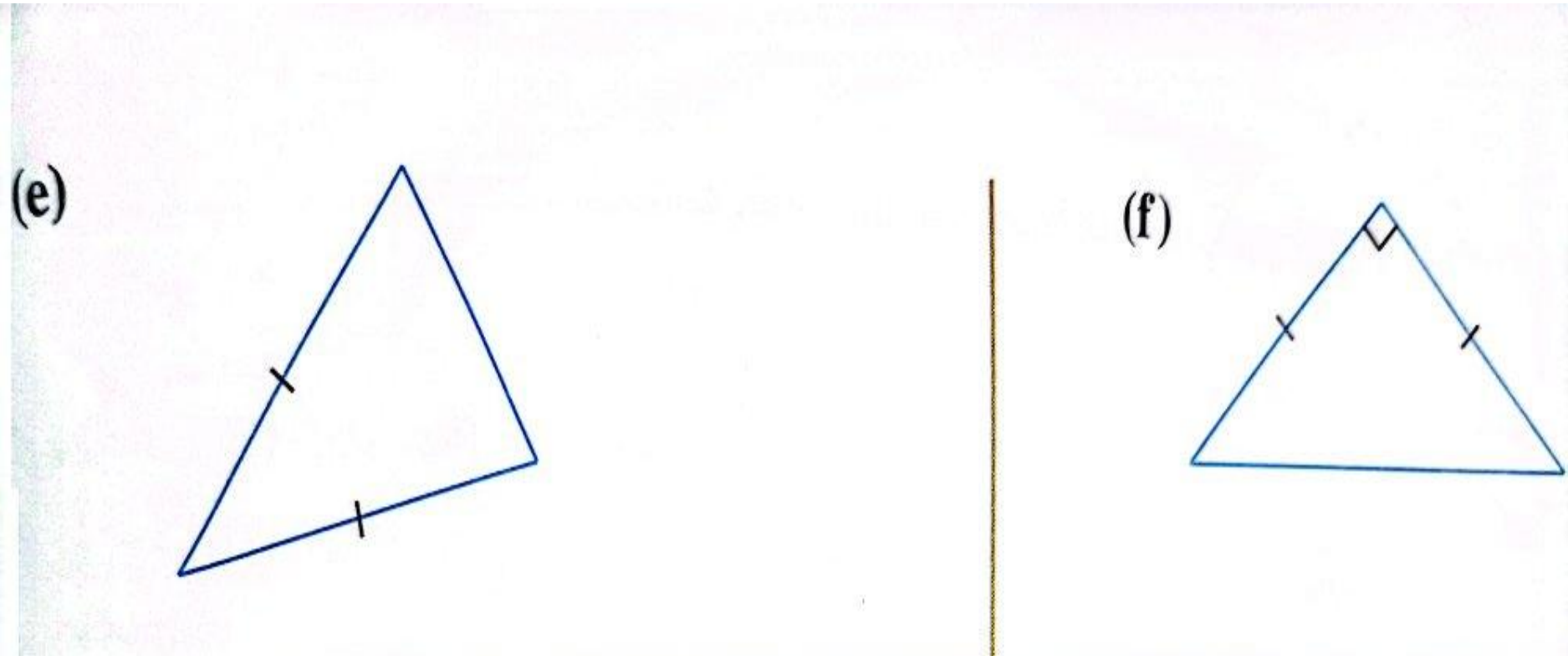


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SUBJECT: Math

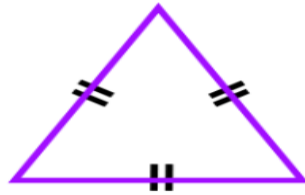
GRADE: 10

UNIT: 2

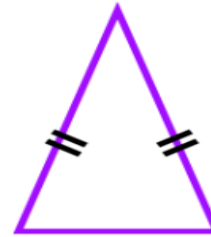
Lesson: 2



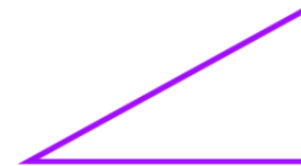
Types of Triangles : Based on Sides



Equilateral Triangle
3 equal sides

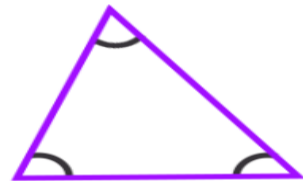


Isosceles Triangle
2 equal sides

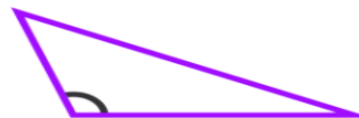


Scalene Triangle
No equal sides

Types of Triangles : Based on Angles



Acute Triangle
3 angle $< 90^\circ$



Obtuse Triangle
1 angle $> 90^\circ$



Right Triangle
1 angle $= 90^\circ$



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Lesson: 1

What is an angle?





SUBJECT: Math

GRADE: 6

UNIT: 3

Lesson: 1

What is an angle?

An angle is a figure formed by two rays that have the same endpoint.



SUBJECT: Math

GRADE: 6

UNIT: 3

Lesson: 1

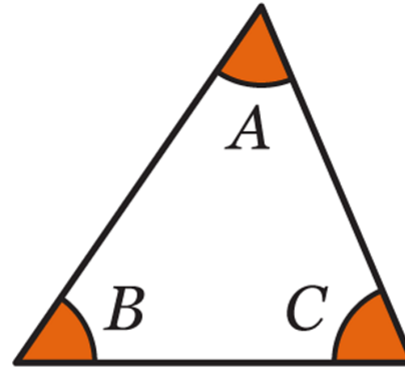
Obtuse

Right

Reflex

Acute

Straight

**Interior angles in a triangle**

$$A + B + C = 180^\circ$$

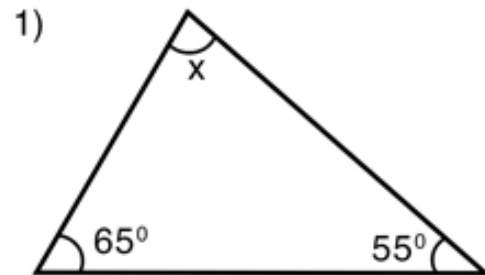


SUBJECT: Math

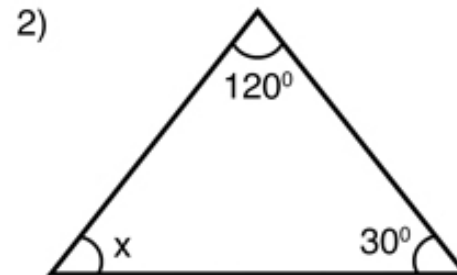
GRADE: 10

UNIT: 2

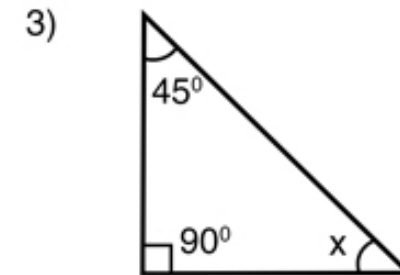
Lesson: 2



$x =$ _____



$x =$ _____



$x =$ _____



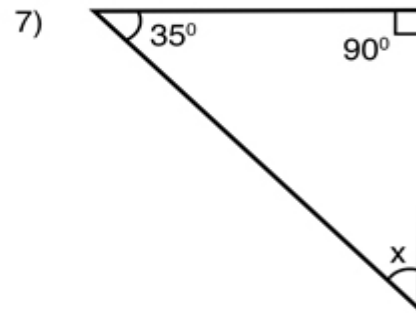
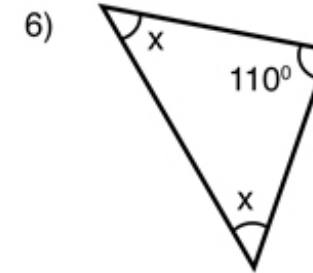
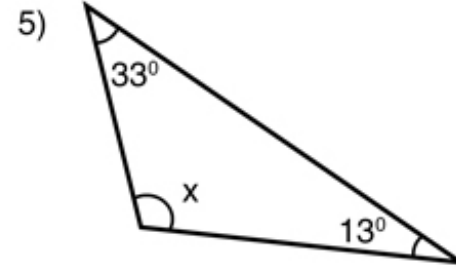
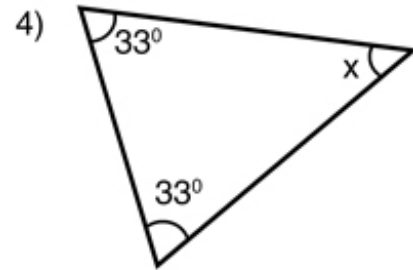


SUBJECT: Math

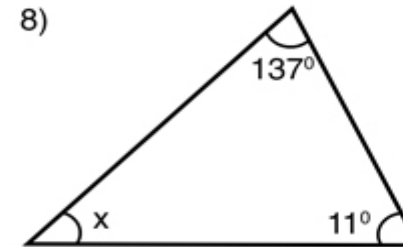
GRADE: 10

UNIT: 2

Lesson: 2



$x =$ -----

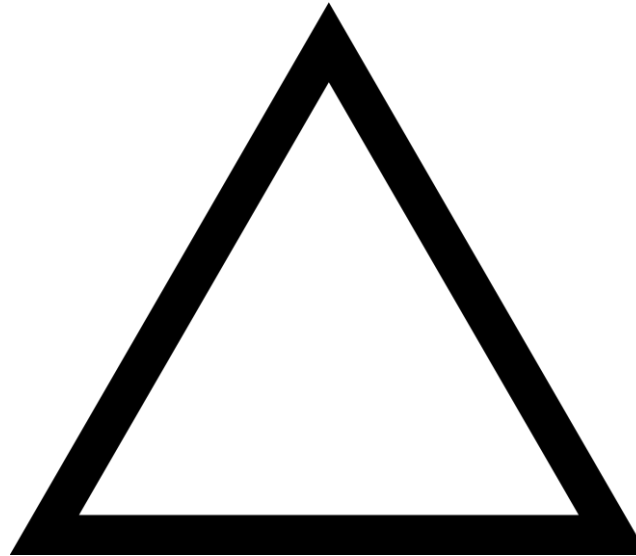


$x =$ -----





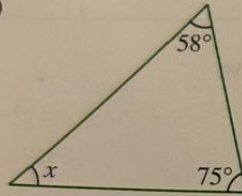
A triangle has angles in the ratio 2:3:4.
Find the measure of each angle.



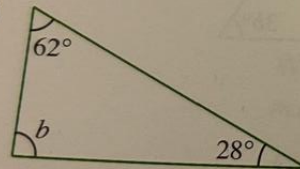
**Exercise 6C**

1. Find the value of the unknown angle(s) marked in each of the following figures. The figures shown are not drawn to scale.

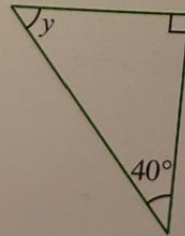
(a)



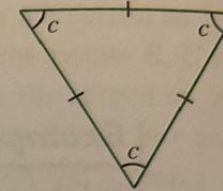
(b)



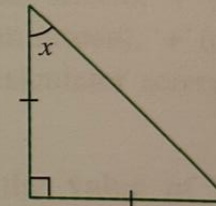
(c)



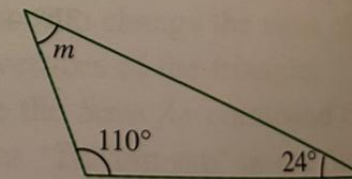
(d)



(e)

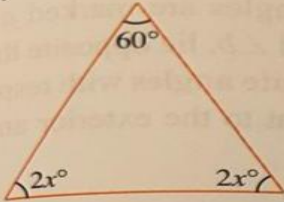


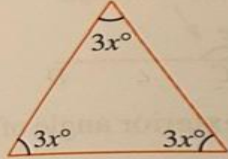
(f)







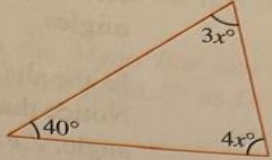
2. Find the value of x in each of the following figures. The figures shown are not drawn to scale.

(a) 

(b) 

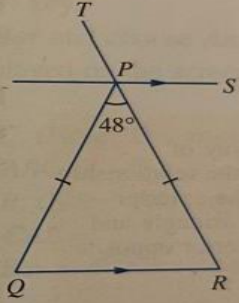
(c) 

(d) 

(e) 

3. PQR is an isosceles triangle in which $PQ = PR$ and $\angle QPR = 48^\circ$. PS is parallel to QR and TPR is a straight line. Calculate

(a) $\angle QRP$,
(b) $\angle TPS$.



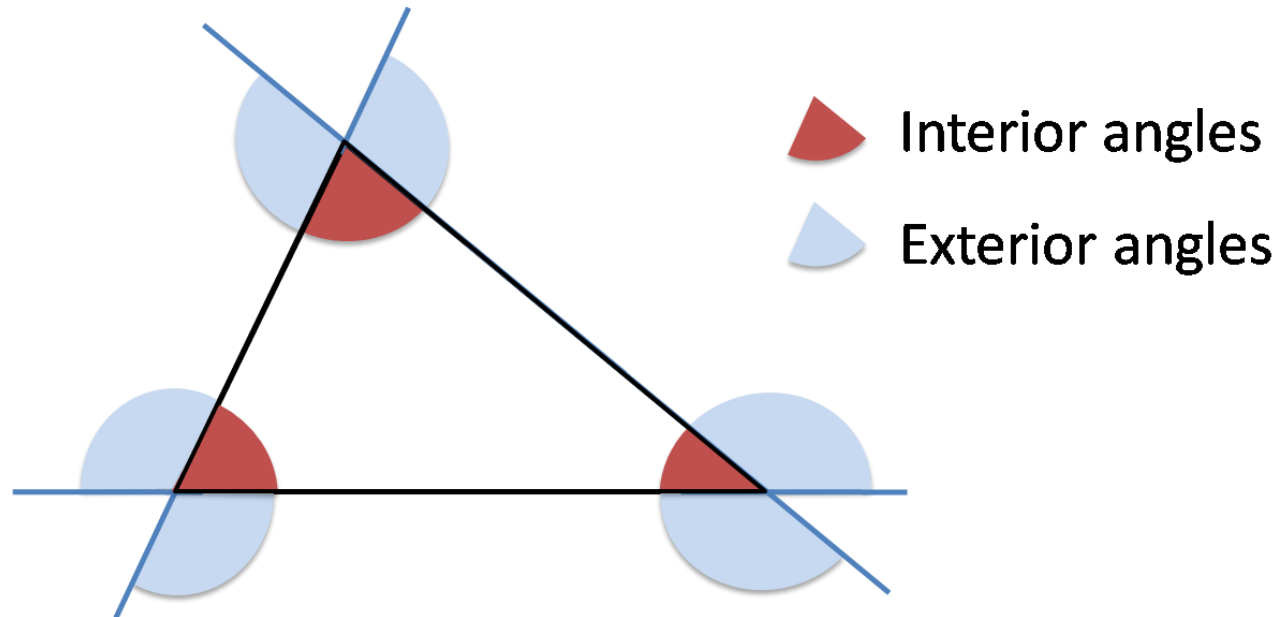


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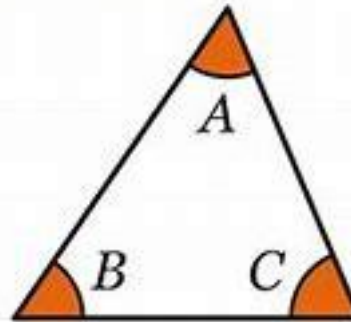
UNIT: 2

Lesson: 3





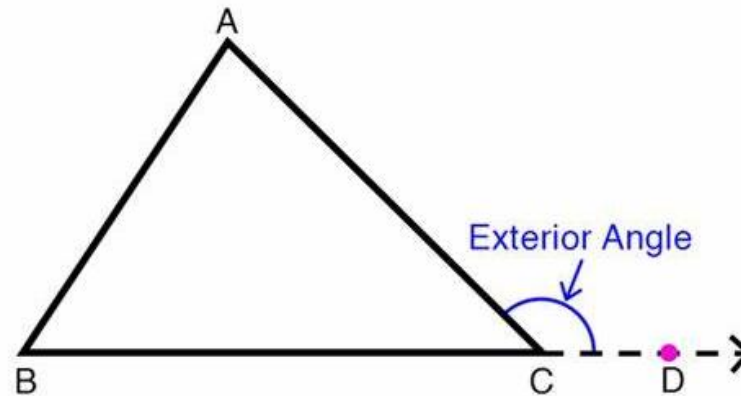
Interior Angle of triangle lie **inside** the triangle



$$A + B + C = 180^\circ$$



Exterior Angle of triangle lie outside the triangle



In $\triangle ABC$, ' $\angle ACD$ ' is the exterior angle



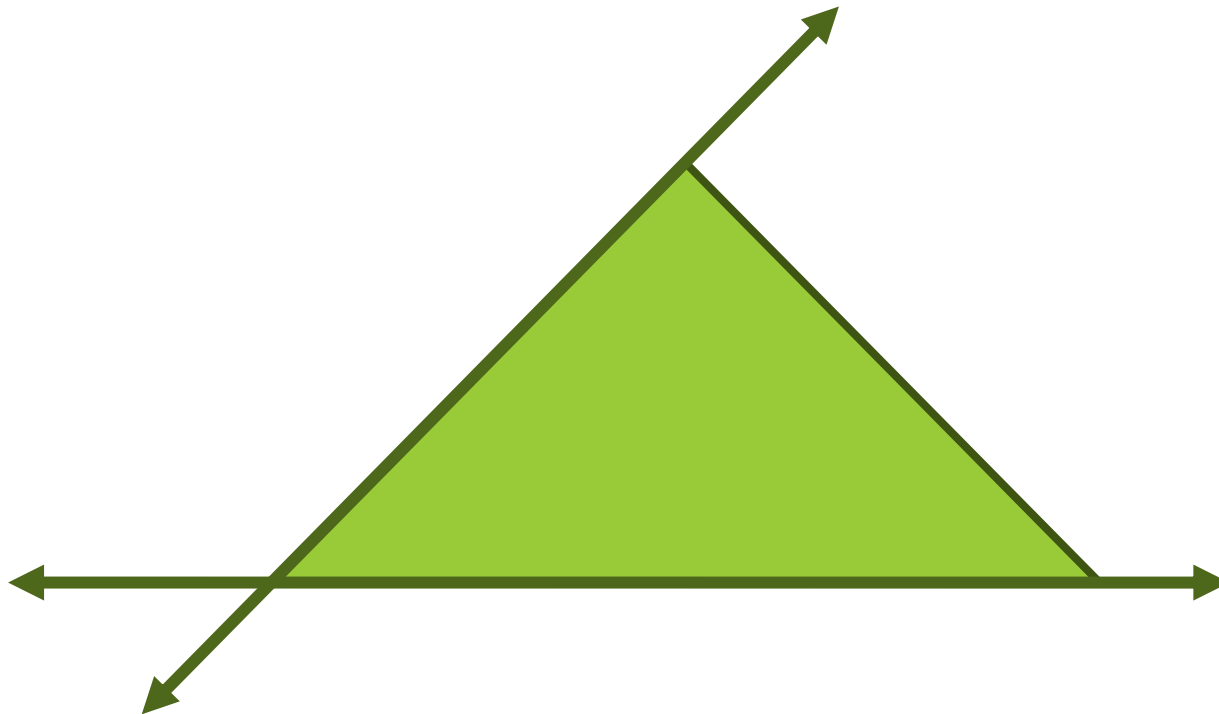
SUBJECT: Math

GRADE: 10

UNIT: 2

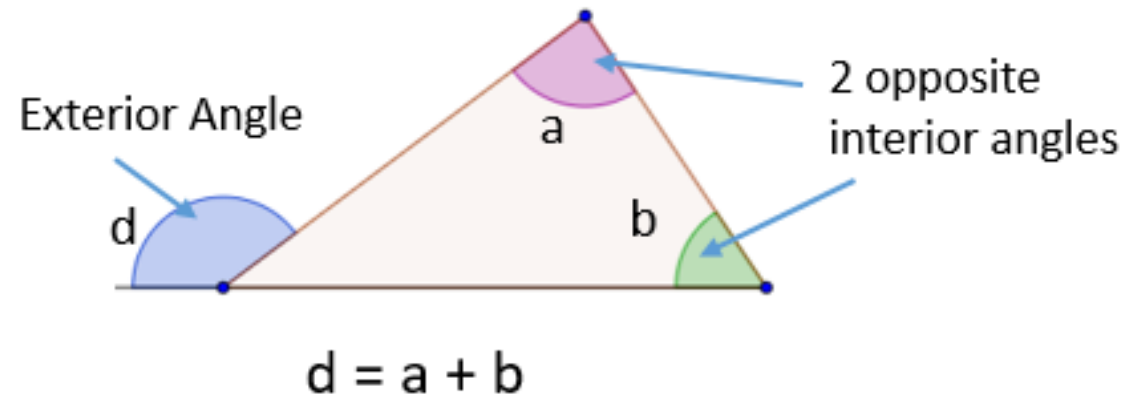
Lesson: 3

Label the exterior angles and their opposite angles!





The exterior angle is equal to the sum of the two opposite interior angles.





SUBJECT: Math

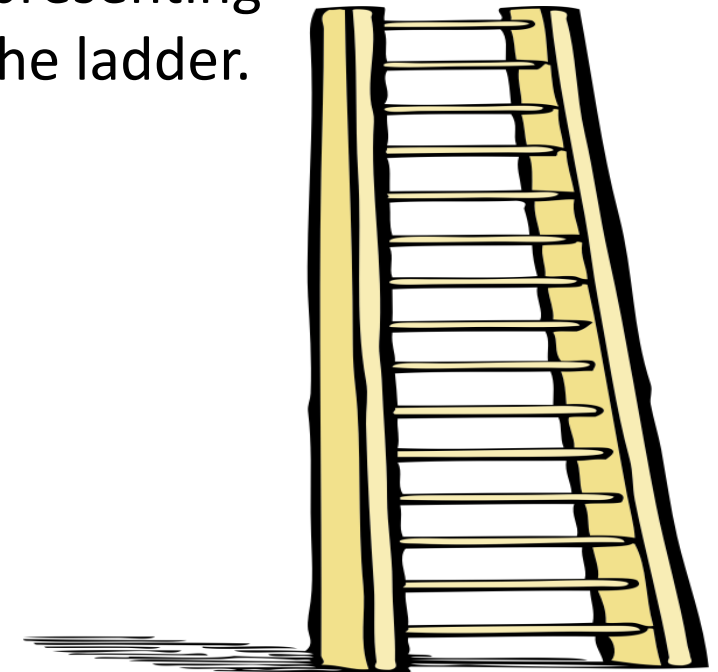
GRADE: 10

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A ladder is leaning against a wall, forming a triangle with the ground and the wall. The ladder makes an angle of 65° with the ground, and the angle between the wall and the ground is 90° . The side of the triangle representing the ground is extended beyond the base of the ladder.

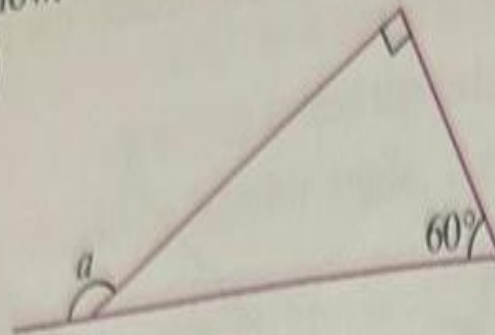
$$\text{Exterior angle} = 25 + 90 = 115^\circ$$



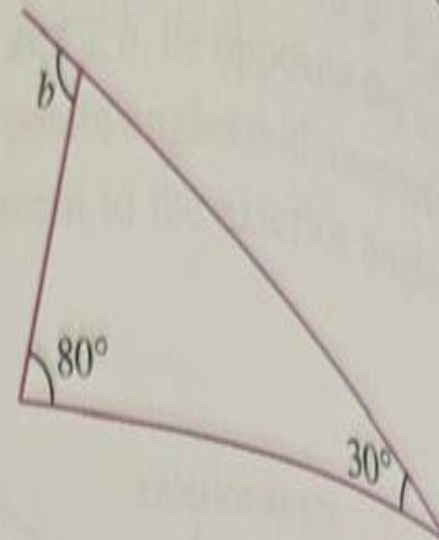
**Example 4**

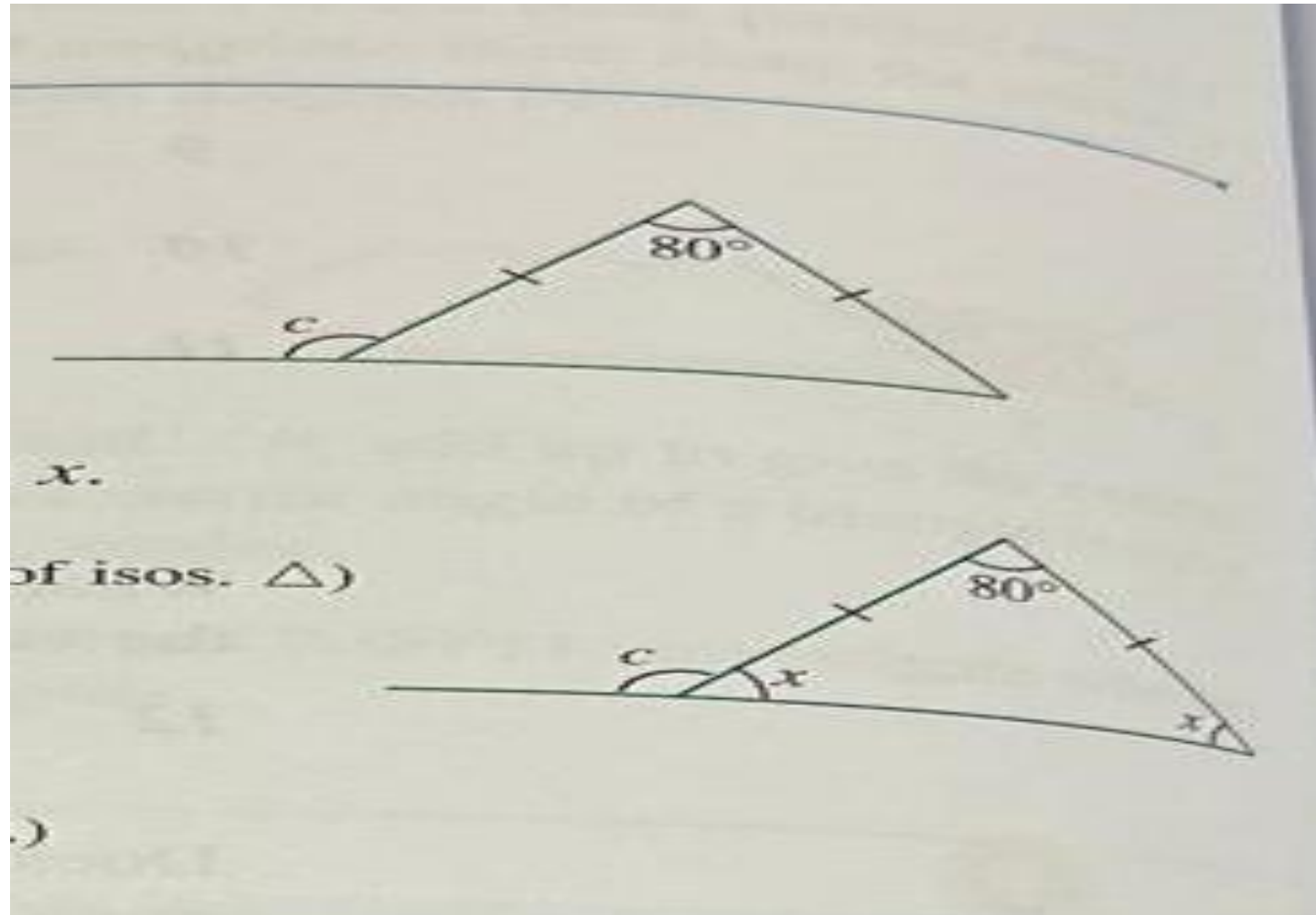
Find the value of the unknown angle marked in each of the figures given below.

(a)



(b)





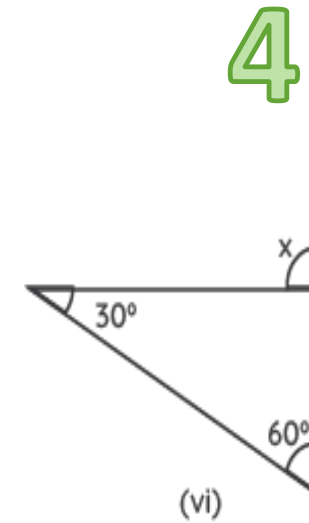
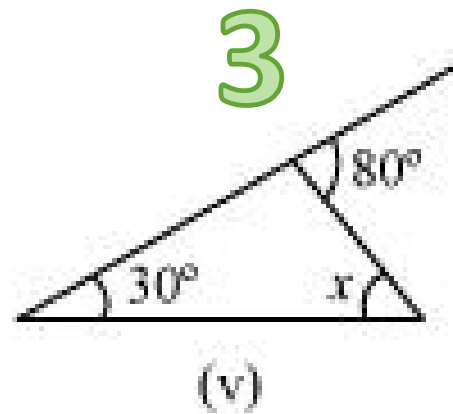
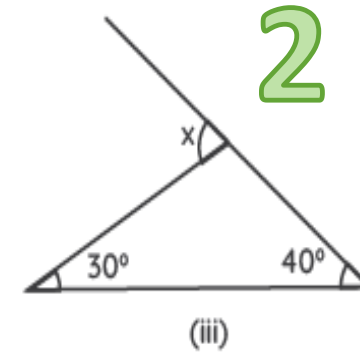
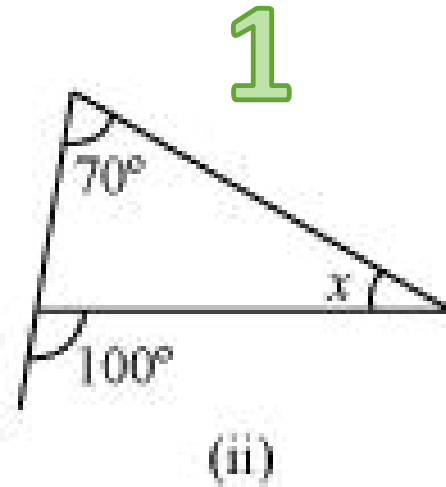


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GRADE: 10

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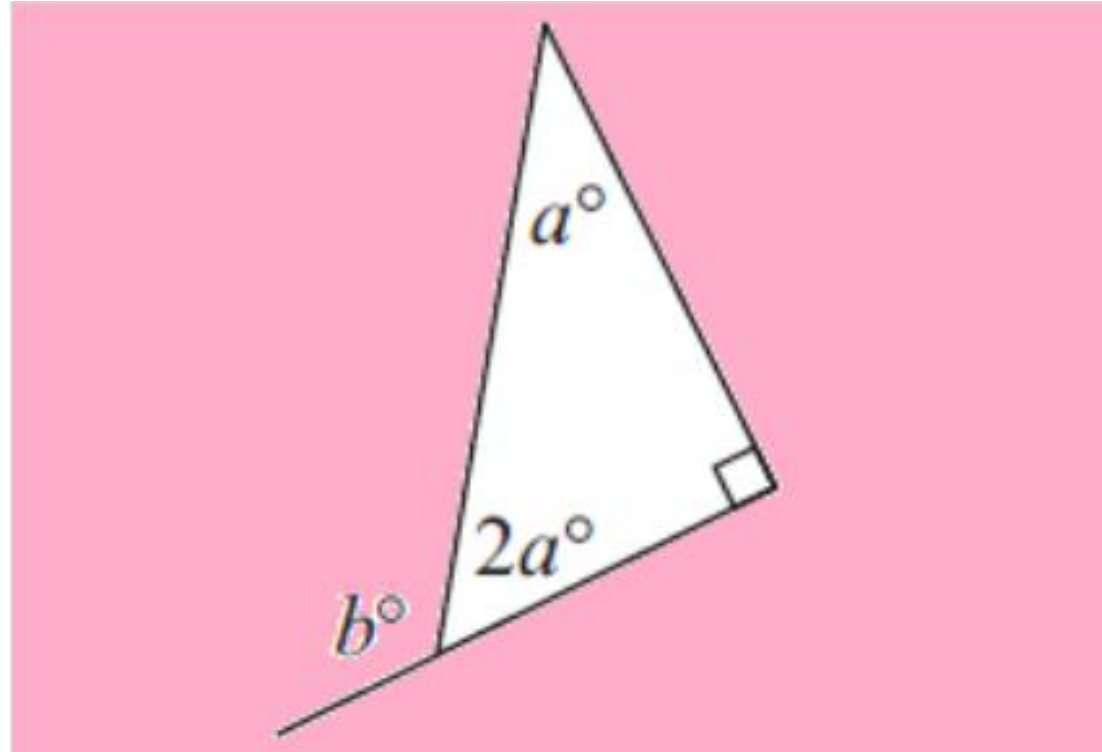


SUBJECT: Math

GRADE: 10

UNIT: 2

Lesson: 3





SUBJECT: Math

GRADE: 10

UNIT: 2

Lesson: 3

Required Questions:

- P. 180 Q1
- P. 184 Q1,2
- P. 189 Q1,2