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Experimental Verification

Very Important for BLE

VVI

Q.1. Verify experimentally that the sum of three interior angles of a triangle is equal to 180° or two right angle.

⇒ Solⁿ.

Given:- We draw two triangles with different measurement as shown:-

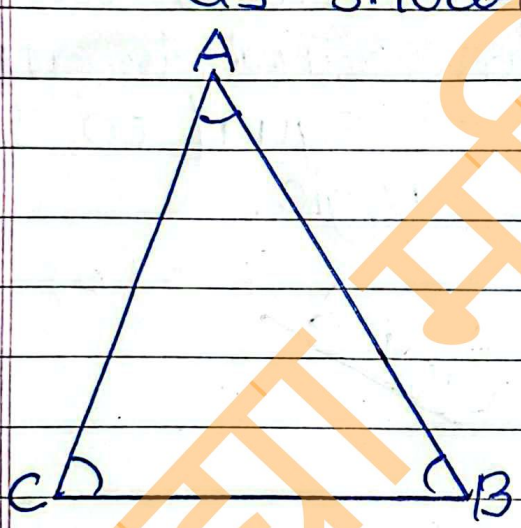

Fig. (a)

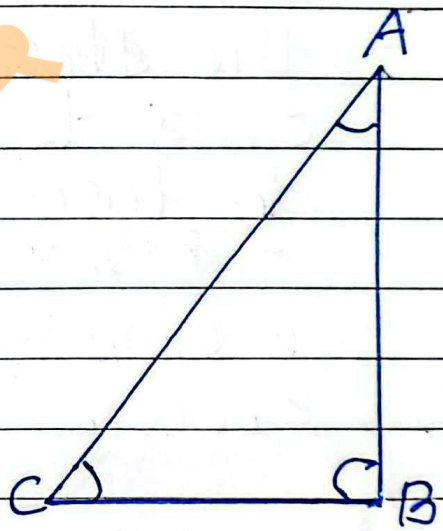

Fig. (b)

To prove:- $\angle A + \angle B + \angle C = 180°$

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Observation

Figure	∠A	∠B	∠C	Result
(a)	53°	58°	69°	∠A+∠B+∠C =180°
(b)	40°	90°	50°	∠A+∠B+∠C =180°

Conclusion :- Hence, from the above experiment, we conclude that the sum of three interior angles of a triangle is equal to 180° or two right angle.

proved

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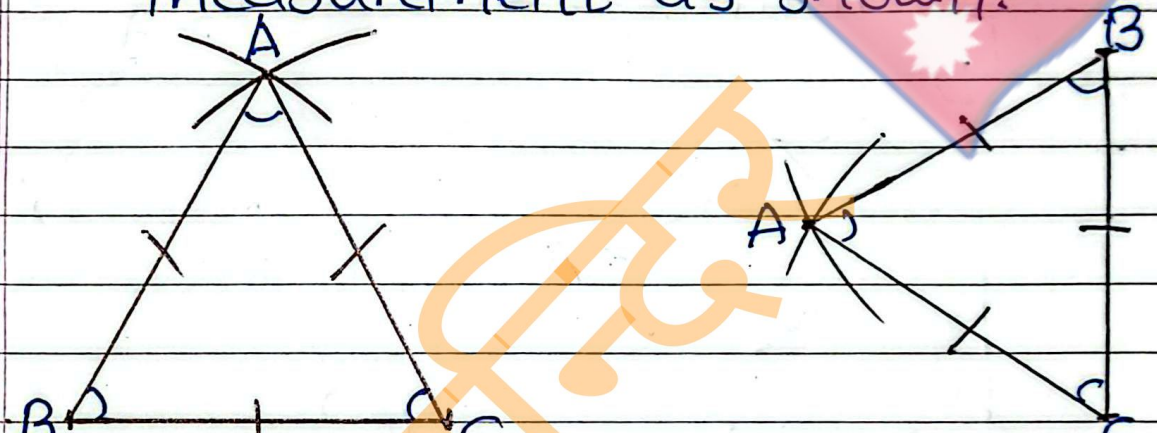
Q.2. Verify experimentally that all the angles of an equilateral triangle are equal.

⇒ Solⁿ.

Given:- We draw two equilateral triangles with different measurement as shown:-



To prove:- $\angle A = \angle B = \angle C$

Observation:-

Figure	$\angle A$	$\angle B$	$\angle C$	Result
(a)	60°	60°	60°	$\angle A = \angle B = \angle C$
(b)	60°	60°	60°	$\angle A = \angle B = \angle C$

Conclusion:- Hence, from the above experiment, we conclude that all the base angles of an equilateral triangle are equal.

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W1

3. Verify experimentally that the base angles of an isosceles triangle are equal.

⇒ Sol^{n}.

Given:- We draw two is isosceles triangles with different measurement as shown:-

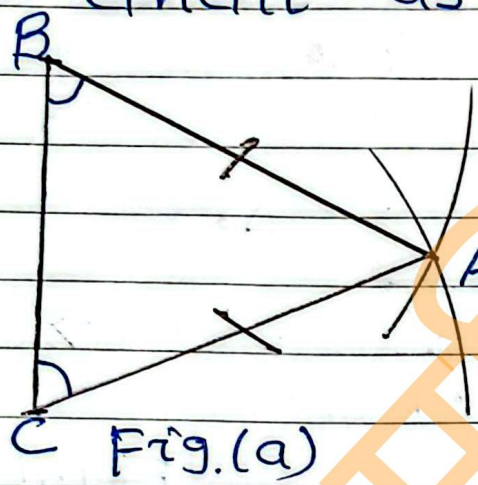

Fig.(a)

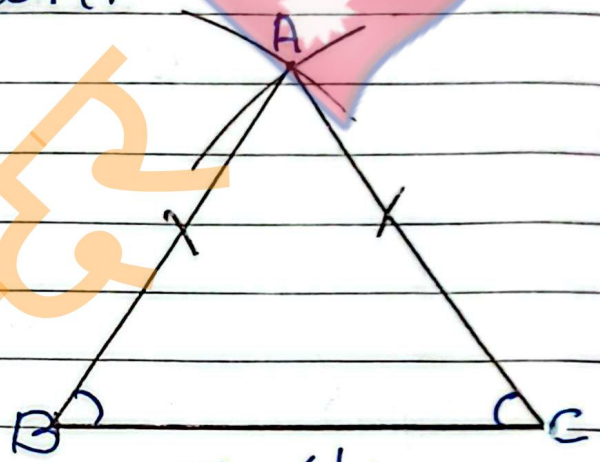

Fig.(b)

To prove:- $\angle B = \angle C$

Observation:-

Figure	$\angle B$	$\angle C$	Result
(a)	67°	67°	$\angle B = \angle C$
(b)	56°	56°	$\angle B = \angle C$

Conclusion:- Hence, from the above experiment, we conclude that the base angles of an isosceles triangle are equal.

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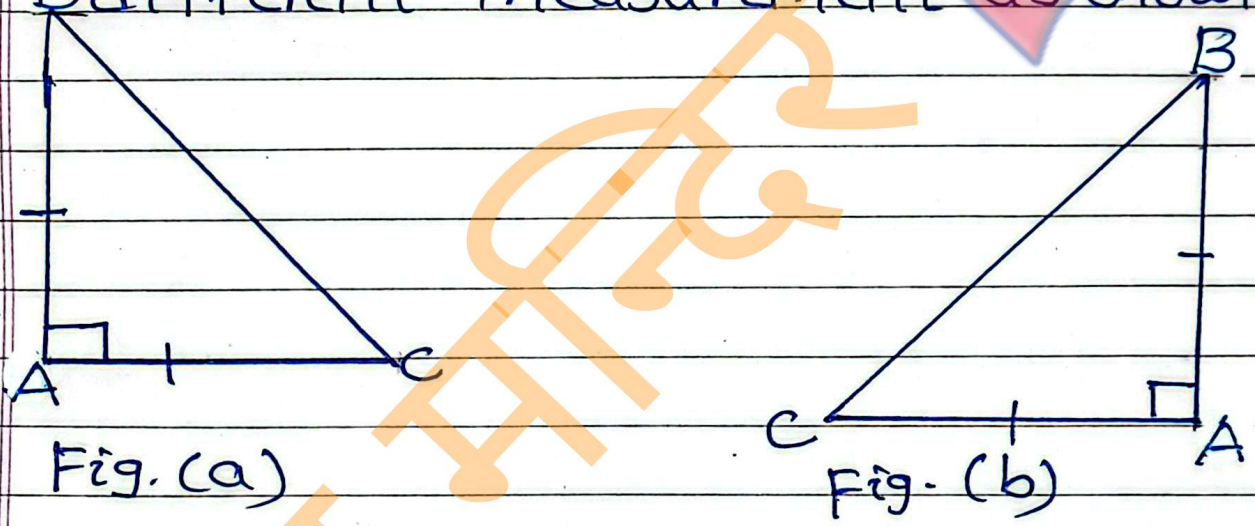
Q4. Verify experimentally that the base angles of a right angled isosceles triangle are equal and each is 45°

⇒ Sol(n).

Given:- We draw two right angled isosceles triangle with different measurement as shown:-



To prove:- $\angle B = \angle C = 45°$

Observation

Figure	$\angle B$	$\angle C$	Result
(a)	45°	45°	$\angle B = \angle C = 45°$
(b)	45°	45°	$\angle B = \angle C = 45°$

Conclusion:- Hence, from the above experiment, we conclude that the base angles of a right angled isosceles triangle are equal and each is 45°.