



وزارة التربية والتعليم
الإدارة المركزية لتطوير المناهج
مكتب مستشار الرياضيات

برعاية معالي وزير التربية والتعليم السيد الأسناذ / محمد عبد اللطيف

ونوجيهات رئيس الإدارة المركزية لتطوير المناهج

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أداءات و تقييمات
للفئة الأولى الثانوي

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First secondary grade - Classroom performance - Third week

1) Find each of the following in simplest form:

(1) i^{45} (2) i^{-37} (3) $3i(-2i)$ (4) $(-2i)^2(-3i)^2$

2) Find the solution set of the following equation in the set of complex numbers.

$$4z + 72 = 0$$

3) Find the values of x and y that satisfy the following equation:

$$(3x - y) + (x - 3y)i = 5 - i$$

4) Find the product of each of the following in simplest form:

(a) $(2 + \sqrt{-9})(2 - 3i)$ (b) $(1 + i)^6$

5) Put the number $\frac{2-3i}{3+2i}$ as a complex number, $i^2 = -1$

6) If the measure of a directed angle is equal to 120,

Answer the following:

- Find the quadrant in which it lies.
- Identify two angles, one with a positive measure and the other with a negative measure, that share the terminal side of this angle.

7) A circle has a radius of 10 cm. Find, to the nearest tenth, the length of the arc if the measure of the central angle $\frac{\pi}{4}$

8) Find in π the radian measure of the angles whose measure is

- (a) 30° (b) 90° (c) 120° (d) 390° (e) -135°
(f) -750° (g) $25^\circ 18'$ (h) $30^\circ 50' 48''$

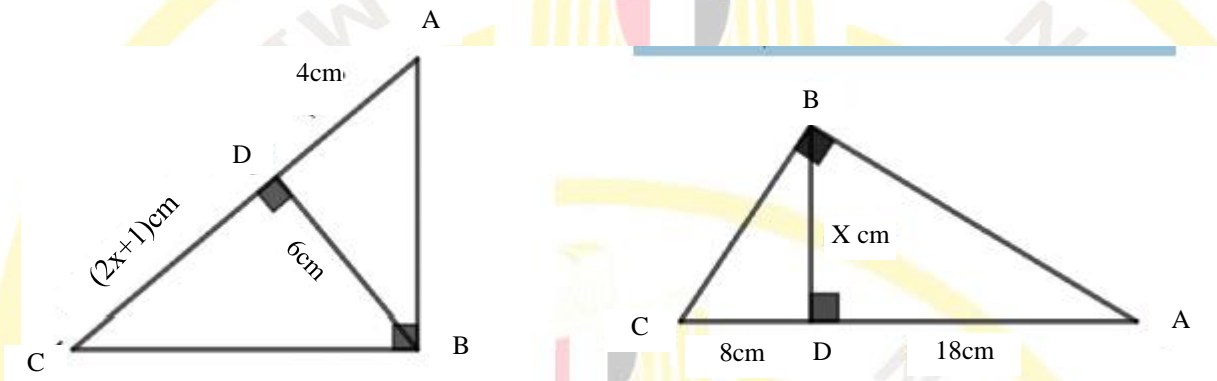
9) Find the degree measure of the angles whose measures are as follows:

- (a) 0.94^{rad} (b) 2.27^{rad} (c) 1.2^{rad} (d) -1.05^{rad}

10) A central angle of 120° encloses an arc of length 10 cm. Calculate the length of the radius of its circle to the nearest tenth.

11) Find the radian measure and degree measure of the central angle subtended by an arc of length 8.7 cm in a circle of radius 4 cm.

12) In each of the following figures, find the numerical values of x.

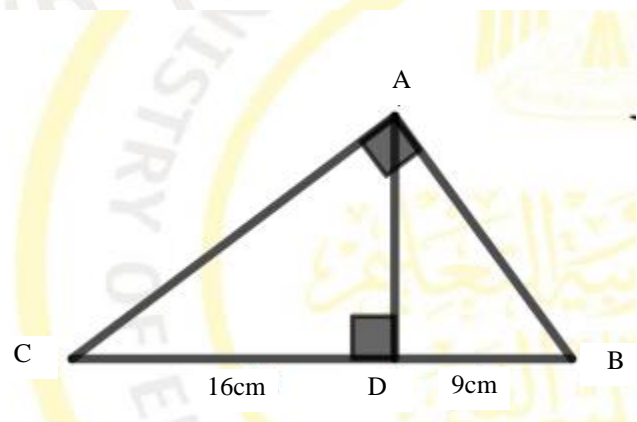


13) In the opposite figure:

ΔABC is a right triangle at A , $AD \perp BC$ $BD = 9$ cm, $DC = 16$ cm

First: Write the triangles that are similar to ΔABC

Second: Find: The lengths of the following sides AB , AC ,AD





14) In the opposite figure:

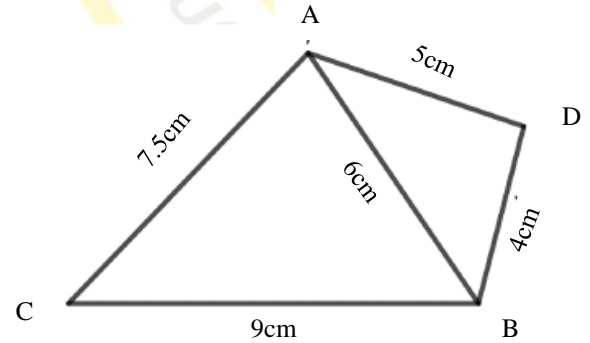
ABC is a triangle in which $AB = 6$ cm,

$BC = 9$ cm, $AC = 7.5$ cm, D is a point outside the triangle ABC

such that $DB = 4$ cm, $DA = 5$ cm

First: Prove that: $\triangle ABC \sim \triangle DBA$

Second: Prove that AB bisects $\angle DBC$



(15) In the opposite figure:

Prove that:

First: $\triangle ABC \sim \triangle XBY$

Second: BC bisects $\angle ABX$

(Such that : B , Y , C are colinear)

