وزارة التربية والتعليم

الإدارة المركزية لتطوير المناهج

إدارة تنمية مادة الرياضيات

أداءات وتقييمات لمنهج الرياضيات

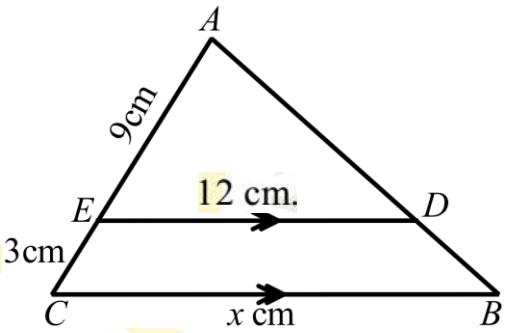
للصف الثانى الأعدادي

للعام الدراسي 2024 / 2025

Home work (14)

➢ **Answer the following questions:**

1) In the opposite figure:



ABC is a triangle, $D \in \overline{AB}$, $and\ E \in \overline{AC}$

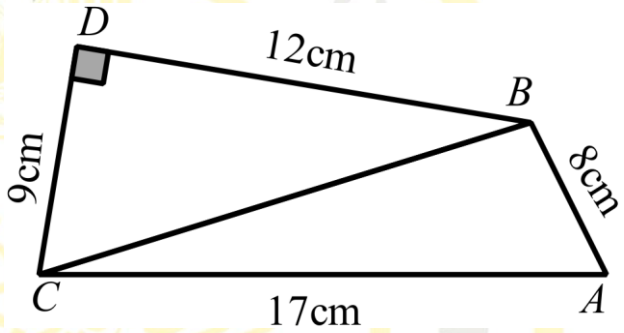
Such that $\overline{DE} \ // \ \overline{BC}$, AE = 9 cm, EC = 3 cm,

DE = 12 cm, BC = x cm.

a) **Prove that:** $\Delta\, ABC \sim \Delta\, ADE$

b) Find: The value of x

2) In the opposite figure:



$m\,(\angle D) = 90°$, AB = 8 cm,

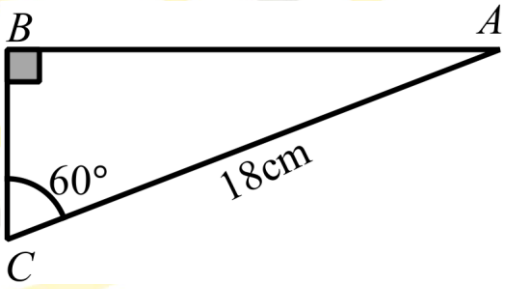
$AC = 17\ cm, DC = 9\ cm,$

BD = 12 cm.

Prove that:

$m\,(\angle ABC) = 90°$

3) In the opposite figure:



ABC is a triangle in which:

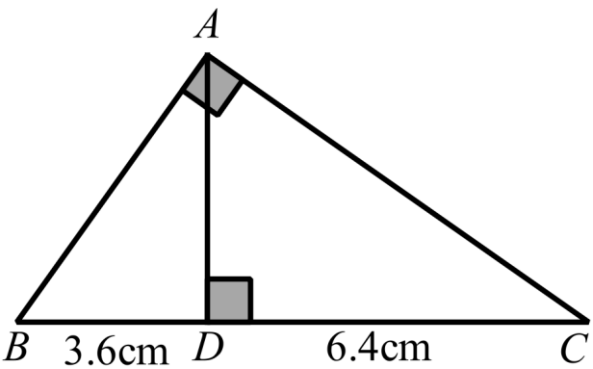
$m\,(\angle B) = 90°, m\,(\angle C) = 60°$,

AC = 18 cm.

Find:

the length of the projection of $\overline{AC}\ on\ \overleftrightarrow{BC}$

4) In the opposite figure:



ABC is a triangle in which:

$m\,(\angle BAC) = 90°, and\ D \in \overline{BC}$

Such that $\overline{AD} \perp \overline{BC}$, DC = 6.4 cm,

DB = 3.6 cm.

Find: The length of $\overline{AD}$

5) Determine the type of the triangle ABC according to its angles if:
AB = 25 cm, BC = 20 cm, AC = 30 cm.

6) If x is the probability of the impossible event and y is the probability of the certain event, find the value of $2x + 5y$

7) The probability of the success of a student in mathematics is 0.9, find the probability of his failure.

8) A school has 600 students, if the probability that the ideal student is 0.6. find the number of girls in this school.

9) A box has 8 identical cards numbered from 1 to 8, if a card is drawn randomly, then find the probability of the drawn card carries an odd number.

10) A class contains 36 pupils, 18 pupils of them play football, 12 play volleyball and 4 play basketball, if one pupil is chosen randomly from the class, find the probability that the chosen pupil:
   a) Plays football.
   b) Plays volleyball.
   c) Doesn't play any of the previous sports.