وزارة التربية والتعليم

الإدارة المركزية لتطوير المناهج

إدارة تنمية مادة الرياضيات

أداءات وتقييمات لمنهج الرياضيات

للصف الثاني الأعدادي

للعام الدراسي 2024 / 2025

Second Year Preparatory Second Term 2024 – 2025
Algebra: Probability
Geometry: Exercises on Euclidean theorem

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Homework (12)

➢ **Answer the following questions:**

1) In the opposite figure:

ABC is a triangle in which:

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

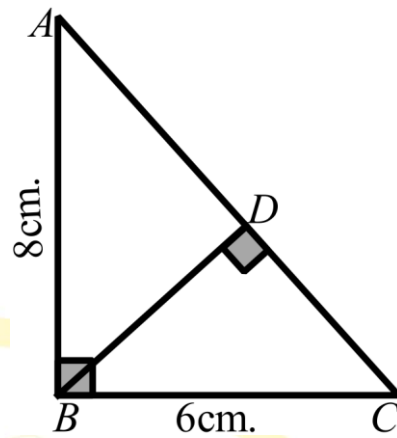Such that $\overline{BD} \perp \overline{AC}$,

$AB = 8\ cm$, BC = 6 cm.

Find:

a) The length of $\overline{AC}$ b) The length of $\overline{BD}$

2) In the opposite figure:

$m (\angle BAC) = m (\angle BEC) = 90°$
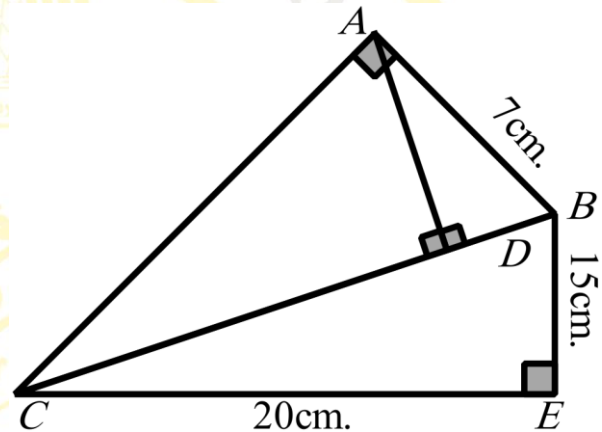
$\overline{AD} \perp \overline{BC}$, AB = 7 cm,

BE = 15 cm, EC = 20 cm.

Find:

a) The length of $\overline{BC}$

b) The length of $\overline{AC}$ c) The length of $\overline{AD}$

3) In the opposite figure:

ABCD is a trapezium in which:

$\overline{AB} \ // \ \overline{DC}$ and

$m (\angle B) = m (\angle AED) = m \angle DFE = 90°$

E is the midpoint of $\overline{BC}$,
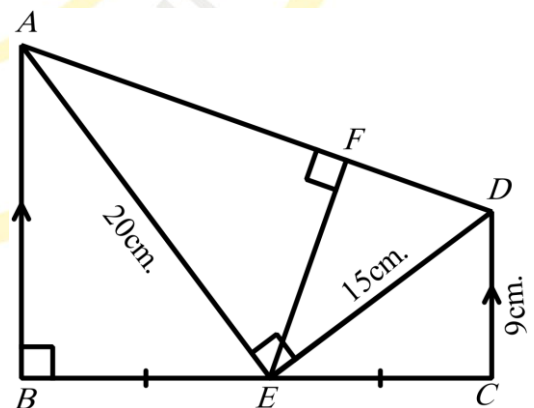
ED = 15 cm, EA = 20 cm, DC = 9 cm.

Find:

a) The length of $\overline{EC}$ b) The length of $\overline{AB}$

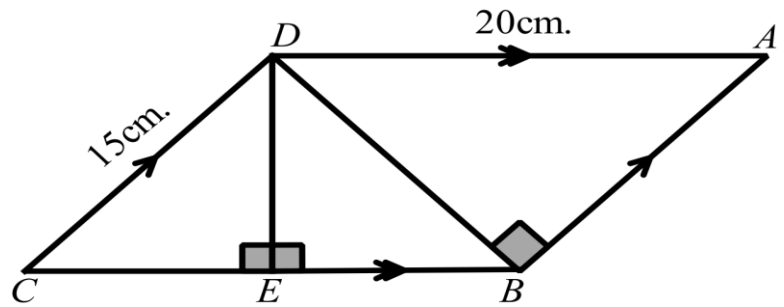c) The length of $\overline{AD}$ d) The length of $\overline{EF}$

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4) In the opposite figure:

ABCD is a parallelogram,

$\overline{AB}$ // $\overline{CD}$, $\overline{AD}$ // $\overline{BC}$

AD = 20 cm, DC = 15 cm,

$m(\angle ABD) = m(\angle DEB) = 90°$

Find:

a) The length of $\overline{BD}$

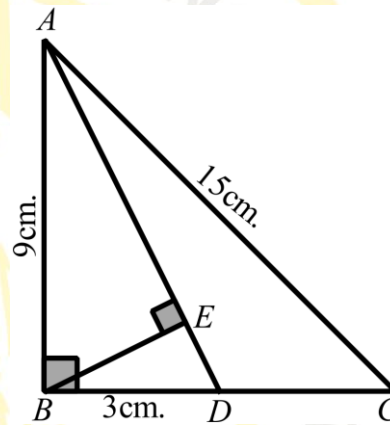b) The length of $\overline{BE}$

c) The length of $\overline{DE}$

5) In the opposite figure:

ABC is a triangle in which:

$m(\angle B) = 90°$ and $\overline{BE} \perp \overline{AD}$ where

$D \in \overline{BC}, E \in \overline{AD}$

$AB = 9\ cm, BD = 3\ cm$, AC = 15 cm.

Find:

a) The length of $\overline{AD}$

b) The length of $\overline{BE}$

c) The length of $\overline{DC}$

6) Find the probability of the certain event.

7) Find the probability of randomly selecting the digit 3 from the number 532532

8) A bag contains 6 white balls, 9 green balls, and 12 red balls, one ball is drawn randomly. Find the probability of the drawn ball is:

a) White   b) Green   c) Red   d) Black

9) The probability of the success of a student in mathematics is 0.7, find the probability of his failure.

10) A box has 11 identical cards numbered from 1 to 11, if a card is drawn randomly, then find the probability of the drawn card carries a prime number.