

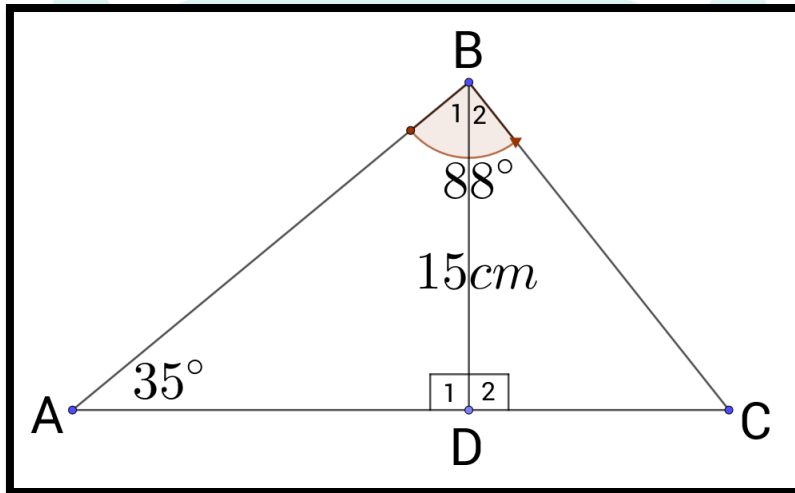
KLASKAMER 10

GRAAD 10 WISKUNDE: EPISODE 62

TRIGONOMETRIE 4

VRAAG 1:

- a. Gegee $\triangle ABC$ met $\hat{A}BC = 88^\circ$, $\hat{B}AC = 35^\circ$ en $BD = 15 \text{ cm}$.



Bereken die lengte van **AC**.

(5)

- b. Bereken die waarde van θ vir $\theta \in [0^\circ; 90^\circ]$ indien:

$$2 \tan(3\theta - 30^\circ) - 8 = 0$$

(5)

BLIKslim

www.klaskamer10.co.za

TOTAAL: 10 PUNTE

GRAAD 10 WISKUNDE: EPISODE 62 (MEMORANDUM)

TRIGONOMETRIE 4

VRAAG 1

a)	<p><i>In $\triangle ABD$:</i></p> $\tan 35^\circ = \frac{15}{AD} \checkmark$ $\therefore AD \tan 35^\circ = 15$ $\therefore AD = \frac{15}{\tan 35^\circ} = 21,42\text{cm} \checkmark$ <p><i>In $\triangle BDC$:</i></p> $\hat{C} = 57^\circ \text{ (binne } \angle\text{'e van } \triangle)$ $\tan 57^\circ = \frac{15}{DC} \checkmark$ $\therefore DC \tan 57^\circ = 15$ $\therefore DC = \frac{15}{\tan 57^\circ} = 9,74\text{cm} \checkmark$ $AC = AD + DC$ $AC = 21,42 + 9,74 = 31,16\text{cm} \checkmark$
b)	$2 \tan(3\theta - 30^\circ) - 8 = 0$ $\therefore \tan(3\theta - 30^\circ) = 4 \checkmark$ <p><i>Verwysin gshoek: $75,96^\circ \checkmark$</i></p> $\therefore 3\theta - 30^\circ = 75,96^\circ \checkmark$ $\therefore 3\theta = 105,96^\circ \checkmark$ $\therefore \theta = 35,32^\circ \checkmark$