

Nome do aluno

Nº

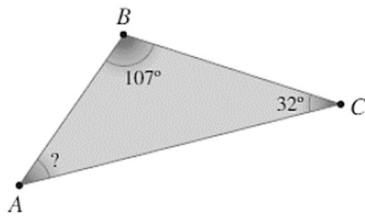
Data

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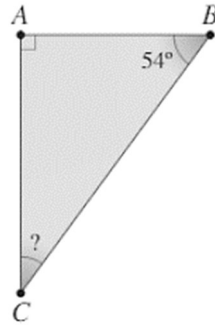
Soma dos ângulos internos de um triângulo

1. Determina a amplitude do ângulo interno em falta em cada um dos seguintes triângulos.

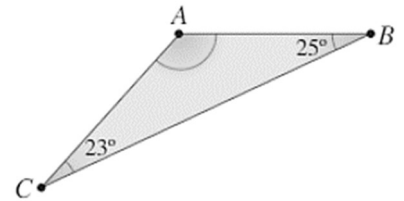
1.1.



1.2.



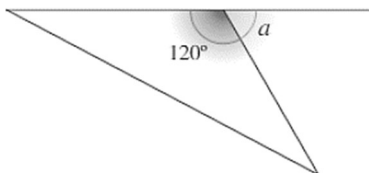
1.3.



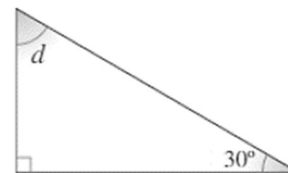
2. Dois dos ângulos de um triângulo são iguais e o terceiro mede 70° de amplitude. Quanto mede a amplitude de cada um dos outros ângulos?

3. Em cada alínea, refere qual é a amplitude dos ângulos marcados com as letras.

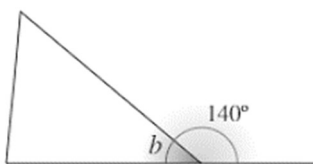
3.1.



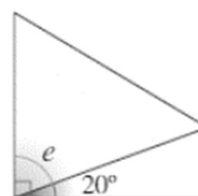
3.4.



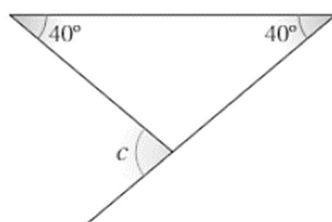
3.2.



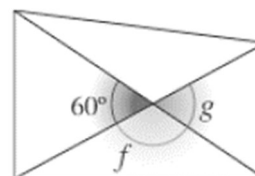
3.5.



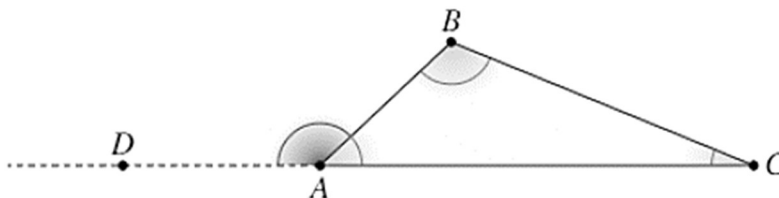
3.3.



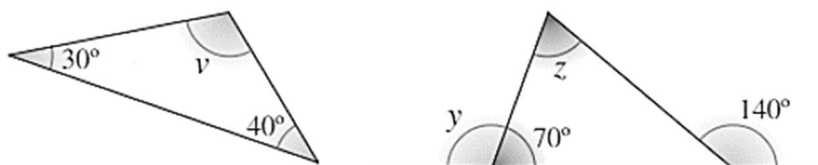
3.6.



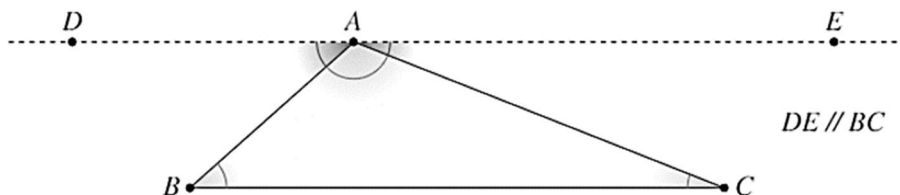
4. Sabendo que, na figura seguinte, $\widehat{ABC} = 114^\circ$ e $\widehat{BCA} = 22^\circ$, determina \widehat{DAB} .



5. Descobre as amplitudes dos ângulos assinalados pelas letras.



6. Tendo em conta a figura seguinte, em que $\widehat{EAC} = 21^\circ$ e $\widehat{DAB} = 42^\circ$, determina a medida da amplitude de cada um dos ângulos internos do triângulo e justifica.



Soluções

1.

1.1. $180^\circ - 107^\circ - 32^\circ = 41^\circ$

1.2. $180^\circ - 90^\circ - 54^\circ = 36^\circ$

1.3. $180^\circ - 25^\circ - 23^\circ = 132^\circ$

2. $180^\circ - 70^\circ = 110^\circ$; $110^\circ \div 2 = 55^\circ$. A medida de cada um desses ângulos é igual a 55°

3.

3.1. $\hat{a} = 180^\circ - 120^\circ = 60^\circ$

3.2. $\hat{b} = 180^\circ - 140^\circ = 40^\circ$

3.3. $180^\circ - 40^\circ - 40^\circ = 100^\circ$; $\hat{c} = 180^\circ - 100^\circ = 80^\circ$

3.4. $\hat{d} = 180^\circ - 90^\circ - 30^\circ = 60^\circ$

3.5. $\hat{e} = 90^\circ - 20^\circ = 70^\circ$

3.6. $\hat{g} = 60^\circ$; $360^\circ - 60^\circ - 60^\circ = 240^\circ$; $\hat{f} = 240^\circ \div 2 = 120^\circ$

4. $B\hat{A}C = 180^\circ - 114^\circ - 22^\circ = 44^\circ$

$$D\hat{A}B + B\hat{A}C = 180^\circ$$

$$D\hat{A}B = 180^\circ - B\hat{A}C = 180^\circ - 44^\circ = 136^\circ$$

5. $\hat{v} = 180^\circ - 40^\circ - 30^\circ = 110^\circ$

$$180^\circ - 140^\circ = 40^\circ$$

$$\hat{z} = 180^\circ - 70^\circ - 40^\circ = 70^\circ$$

$$\hat{y} = 180^\circ - 70^\circ = 110^\circ$$

6. $B\hat{A}C + D\hat{A}B + E\hat{A}C = 180^\circ$ (os ângulos são suplementares)

$$B\hat{A}C + 42^\circ + 21^\circ = 180^\circ$$

$$B\hat{A}C = 180^\circ - 63^\circ = 117^\circ$$

$$A\hat{C}B = E\hat{A}C = 21^\circ$$
 (os ângulos são alternos externos)

$$C\hat{B}A = D\hat{A}B = 42^\circ$$
 (os ângulos são alternos internos)