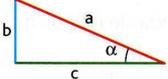
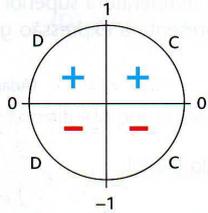
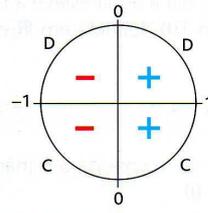
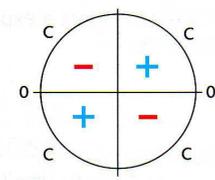
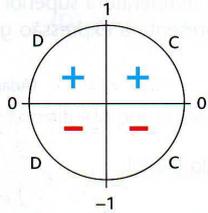
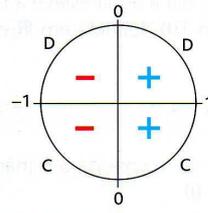
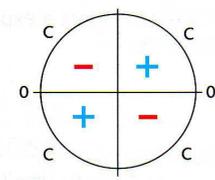
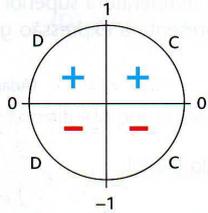
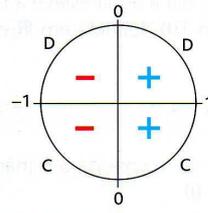
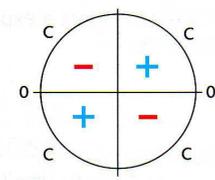


Assunto: Síntese – Revisão de trigonometria

12º Ano

Relações num triângulo rectângulo	 $\frac{b}{a} = \text{sen } \alpha \quad \frac{c}{a} = \text{cos } \alpha \quad \frac{b}{c} = \text{tg } \alpha$						
Fórmulas fundamentais	$\text{sen}^2 \alpha + \text{cos}^2 \alpha = 1$ $\text{tg}^2 \alpha + 1 = \frac{1}{\text{cos}^2 \alpha}$ $\frac{\text{sen } \alpha}{\text{cos } \alpha} = \text{tg } \alpha$						
Alguns valores exactos	$\text{sen } \frac{\pi}{6} = \frac{1}{2} \quad \text{cos } \frac{\pi}{6} = \frac{\sqrt{3}}{2} \quad \text{tg } \frac{\pi}{6} = \frac{\sqrt{3}}{3}$ $\text{sen } \frac{\pi}{4} = \frac{\sqrt{2}}{2} \quad \text{cos } \frac{\pi}{4} = \frac{\sqrt{2}}{2} \quad \text{tg } \frac{\pi}{4} = 1$ $\text{sen } \frac{\pi}{3} = \frac{\sqrt{3}}{2} \quad \text{cos } \frac{\pi}{3} = \frac{1}{2} \quad \text{tg } \frac{\pi}{3} = \sqrt{3}$						
Variação e sinal nos 4 quadrantes	<table border="0"><tr><td style="text-align: center;">seno</td><td style="text-align: center;">co-seno</td><td style="text-align: center;">tangente</td></tr><tr><td></td><td></td><td></td></tr></table>	seno	co-seno	tangente			
seno	co-seno	tangente					
							
Relação entre as funções de α e as de $-\alpha$ e de $\pi \pm \alpha$	$\text{sen } (-\alpha) = -\text{sen } \alpha \quad \text{sen } (\pi - \alpha) = \text{sen } \alpha \quad \text{sen } (\pi + \alpha) = -\text{sen } \alpha$ $\text{cos } (-\alpha) = \text{cos } \alpha \quad \text{cos } (\pi - \alpha) = -\text{cos } \alpha \quad \text{cos } (\pi + \alpha) = -\text{cos } \alpha$ $\text{tg } (-\alpha) = -\text{tg } \alpha \quad \text{tg } (\pi - \alpha) = -\text{tg } \alpha \quad \text{tg } (\pi + \alpha) = \text{tg } \alpha$						
Relação entre as funções de ângulos complementares	$\text{sen } \left(\frac{\pi}{2} - \alpha \right) = \text{cos } \alpha$ $\text{cos } \left(\frac{\pi}{2} - \alpha \right) = \text{sen } \alpha$ $\text{tg } \left(\frac{\pi}{2} - \alpha \right) = \frac{1}{\text{tg } \alpha}$						
Equações trigonométricas	Reduzir à forma: $\text{sen } x = \text{sen } \alpha \Leftrightarrow x = \alpha + k2\pi, k \in \mathbb{Z} \vee x = \pi - \alpha + k2\pi, k \in \mathbb{Z}$ $\text{cos } x = \text{cos } \alpha \Leftrightarrow x = \alpha + k2\pi, k \in \mathbb{Z} \vee x = -\alpha + k2\pi, k \in \mathbb{Z}$ $\text{tg } x = \text{tg } \alpha \Leftrightarrow x = -\alpha + k\pi, k \in \mathbb{Z}$						