

Fundamentos de Cálculo Aplicado

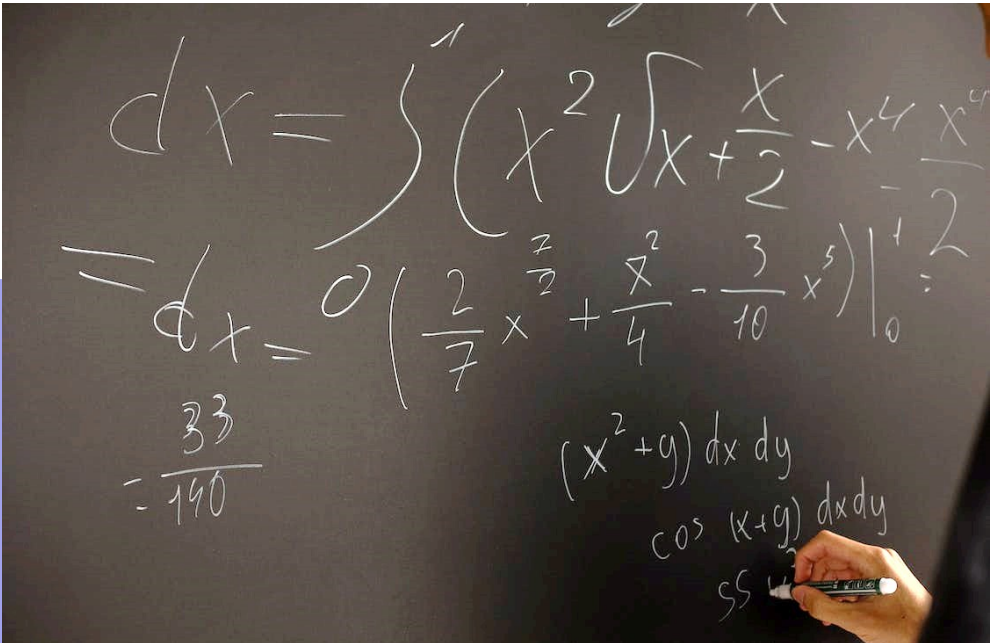
Fundamentos gerais sobre
funções

Profa. Ma. Alessandra Negrini



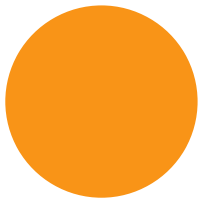
0
4

Função trigonométrica



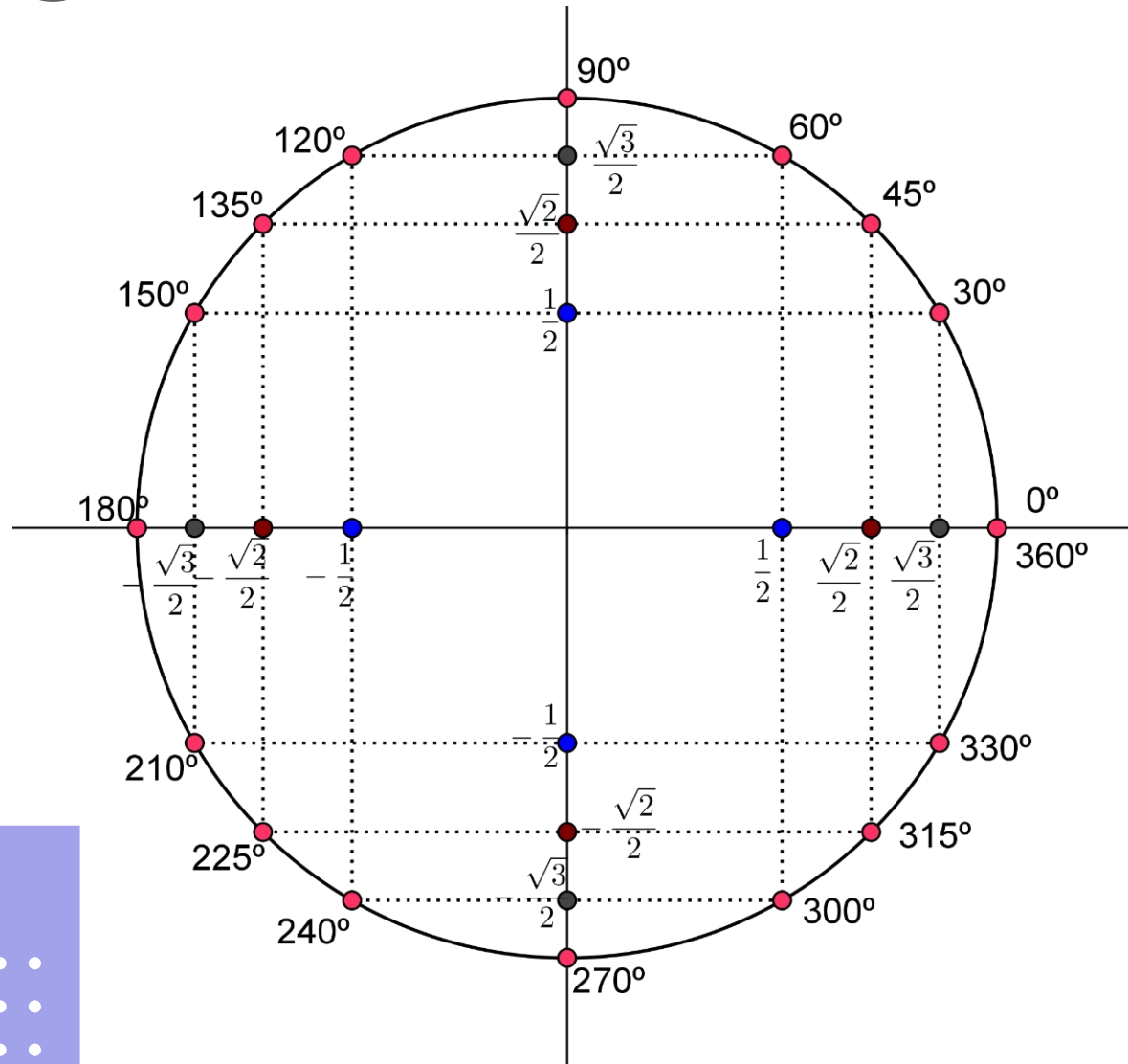
The image shows a chalkboard with handwritten mathematical work. The top part shows the integration of $x^2 \sqrt{x} + \frac{x}{2} - x^4 \frac{x^4}{2}$ to find dx . The middle part shows the evaluation of the integral from 0 to 2, resulting in $\frac{33}{140}$. The bottom part shows the integration of $(x^2 + y) dx dy$ and $\cos(x+y) dx dy$.

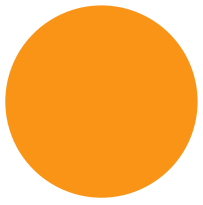
$$dx = \int \left(x^2 \sqrt{x} + \frac{x}{2} - x^4 \frac{x^4}{2} \right)$$
$$= dx = 0 \left(\frac{2}{7} x^{\frac{7}{2}} + \frac{x^2}{4} - \frac{3}{10} x^5 \right) \Big|_0^2 = \frac{33}{140}$$
$$(x^2 + y) dx dy$$
$$\cos(x+y) dx dy$$
$$\int \int$$



Ciclo trigonométrico

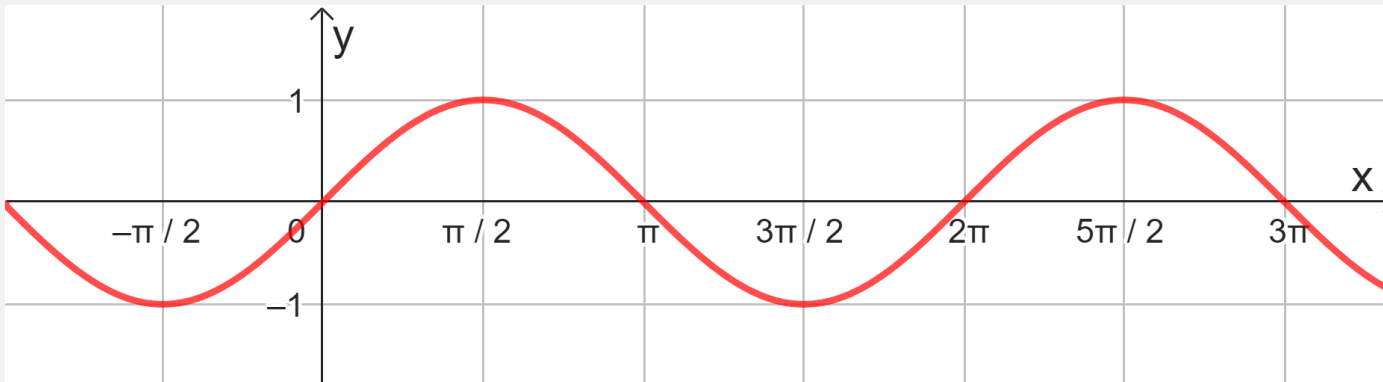
- Raio: 1
- Eixo :
cosseno
- Eixo : seno



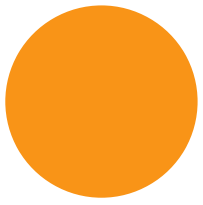


Função seno

definida por

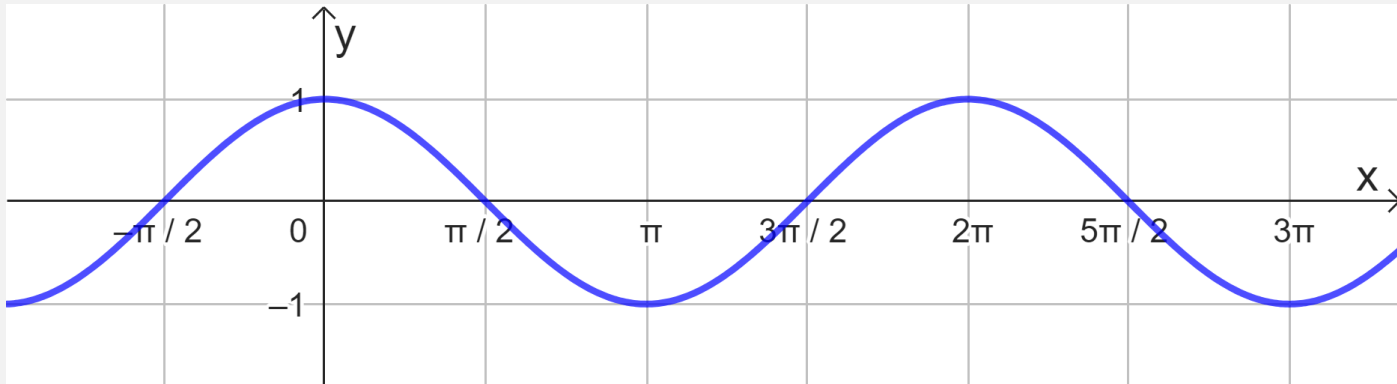


- Gráfico: tipo senoide
- Periódica de período

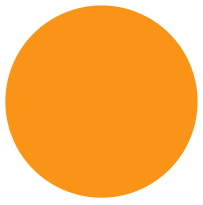


Função cosseno

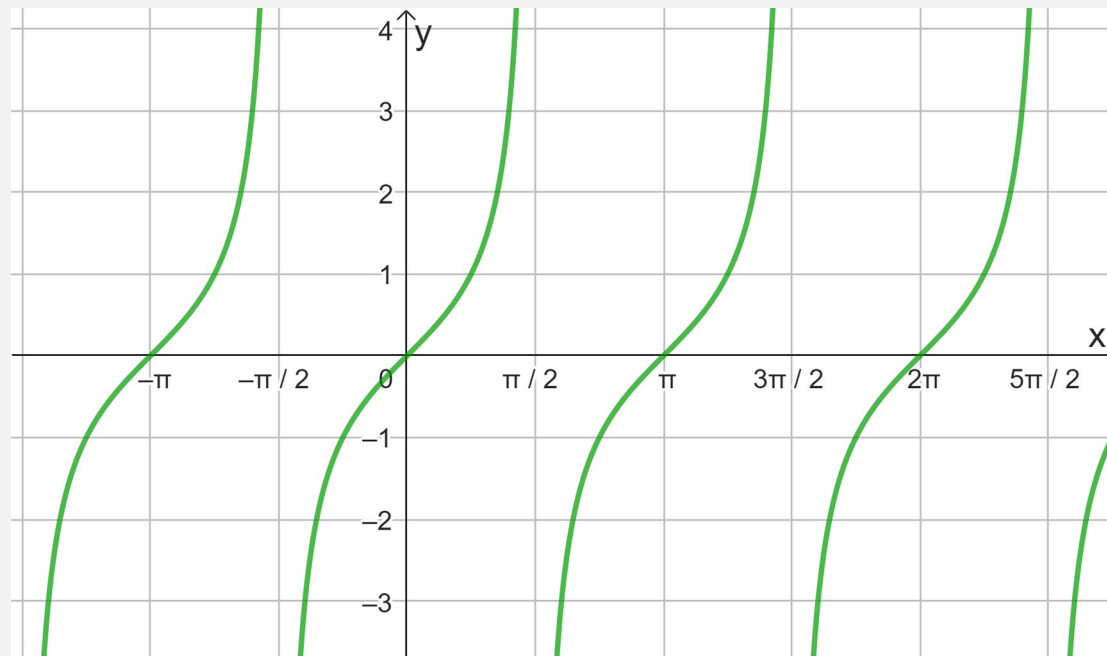
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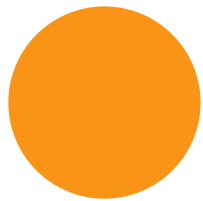


- Gráfico: tipo senoide
- Periódica de período



Função tangente

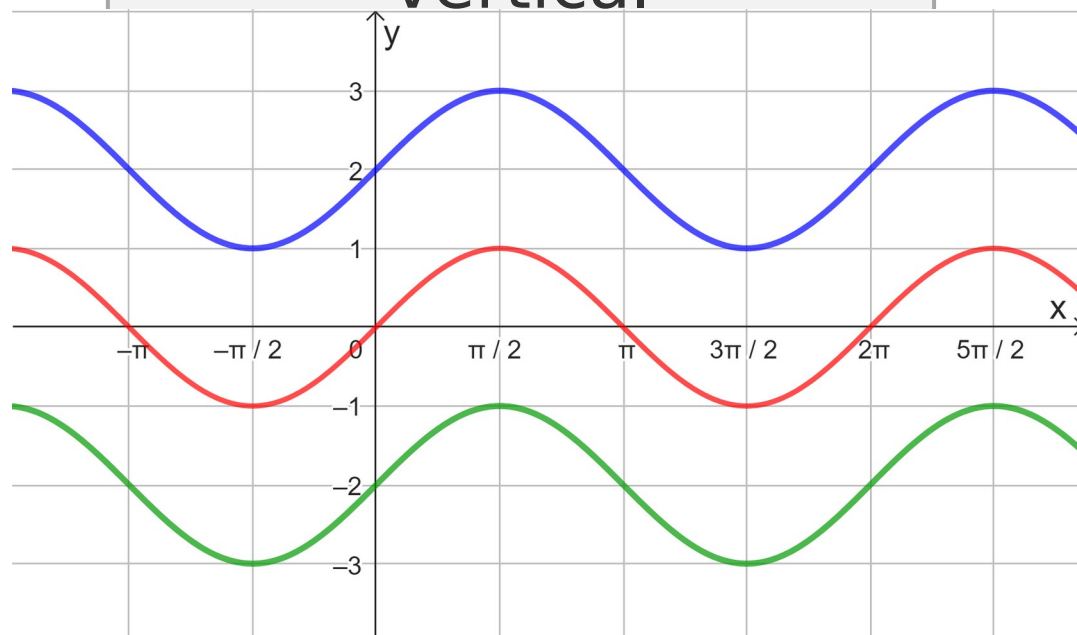


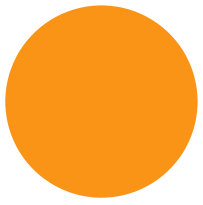


Transformações sobre as funções seno e cosseno

1ª transformação: ,

Deslocamento
vertical

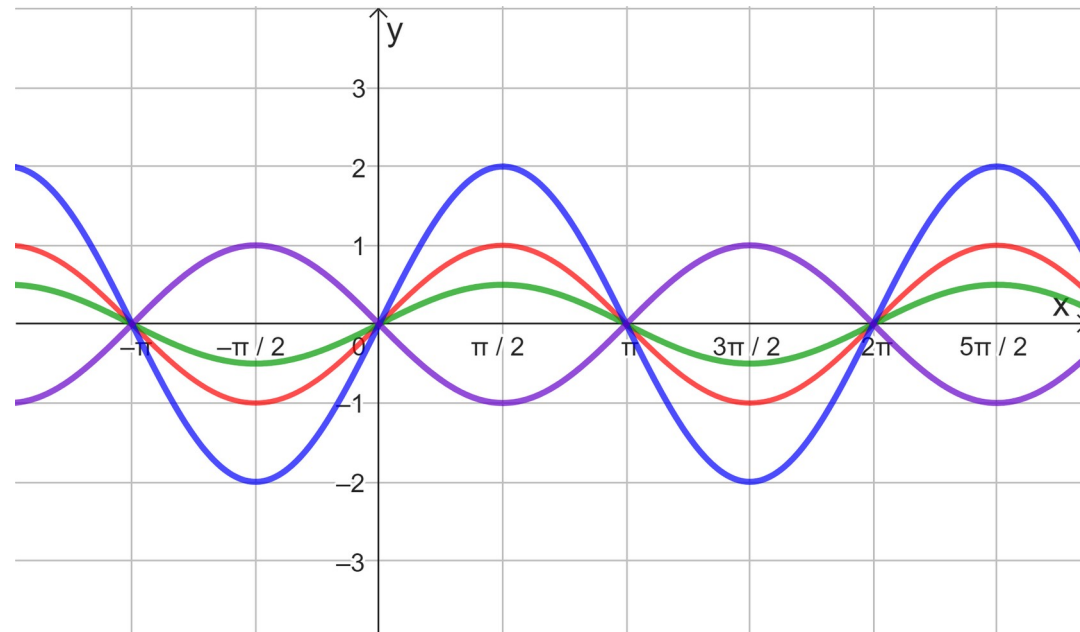


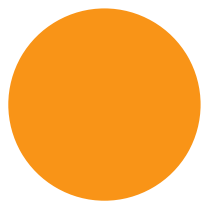


Transformações sobre as funções seno e cosseno

2ª transformação:

Amplitude

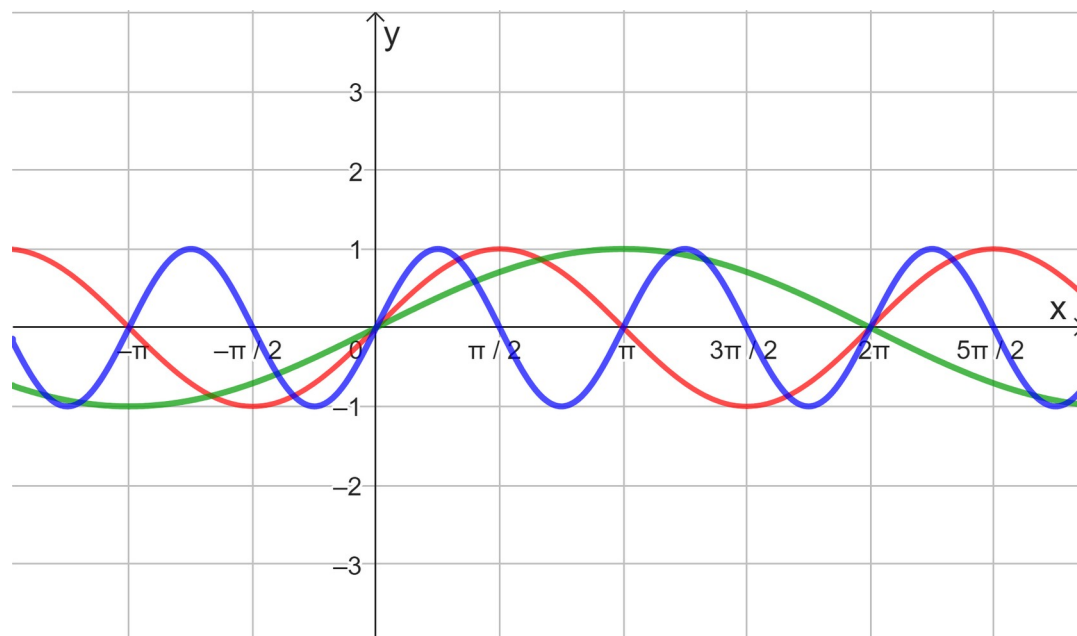


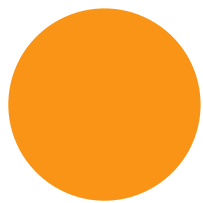


Transformações sobre as funções seno e cosseno

3ª transformação:

Período





Transformações sobre as funções seno e cosseno

4ª transformação:

Deslocamento horizontal

