

Problems 1) $I = \int_{0}^{\infty} (1-\cos \theta)^{5} d\theta$ Sol $I = \int_{0}^{\infty} (2\sin^{2}\theta)^{2} d\theta$ $= 2^{5} \int_{0}^{\infty} \sin^{2}(\theta/2) d\theta$ Put $\theta_{2} = t$, $\theta_{2} = 2t$, $d\theta_{3} = 2dt$ Put $\theta_{2} = t$, $\theta_{3} = 2t$, $d\theta_{4} = 2dt$ $I = 2^{5} \int_{0}^{\infty} \sin^{2}(\theta/2) d\theta$ Using formula $\int_{0}^{\infty} \sin^{2}(\theta/2) d\theta = \frac{1}{2} \int_{0}^{\infty} \frac{(2dt)}{2} d\theta$

$$I = 2^{S} \frac{1}{2} \beta \left(\frac{11}{2} - \frac{1}{2}\right) z$$

$$= 2^{S} \frac{1}{2} \left[\frac{1}{2} \left(\frac{1}{2} - \frac{1}{2}\right) z\right]$$

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$$= 2^{S} \frac{1}{2} \frac$$

$$T = \int_{0}^{\infty} \frac{\sin^{4} 0}{(1+\cos 2)} d\theta$$

$$T = \int_{0}^{\infty} \frac{(2\sin \frac{1}{2}\cos \frac{1}{2})}{(1+\cos 2)} d\theta$$

$$T = \int_{0}^{\infty} \frac{(2\sin \frac{1}{2}\cos \frac{1}{2})}{(2\cos \frac{1}{2})^{2}} d\theta$$

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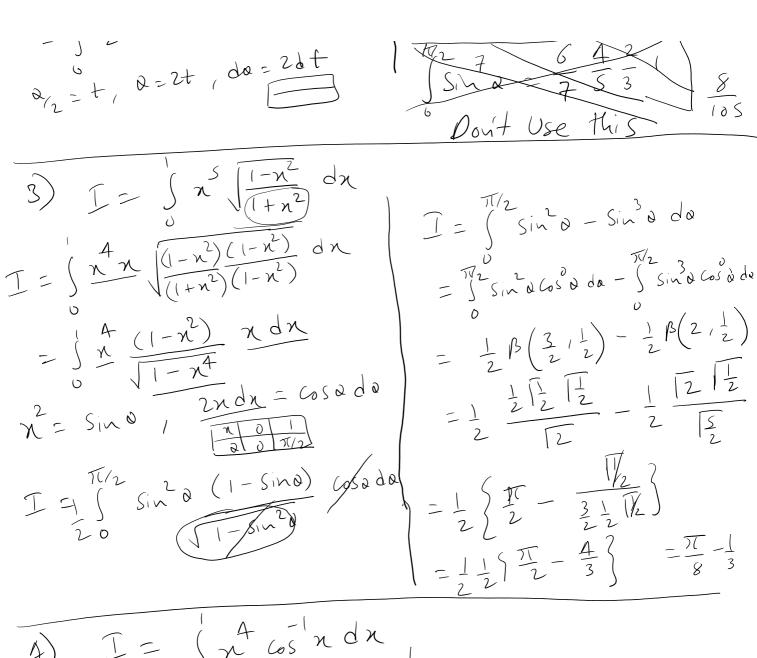
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$$T = 2 \int_{0}^{3} \int_{0}^{7/2} A + \cos^{2} t (2dt)$$

$$= 2^{3} \int_{0}^{1} \int_{0}^{3} \int_{0}^{1} \int_{0}^{3} \int_{0}^{3$$



put
$$\cos n = t$$
, $x = \cos t$

put $\cos n = t$, $x = \cos t$
 $\tan dx$

$$T = \int_{0}^{\infty} \cos^{2} x dx$$

$$T = \int_{0}^{\infty}$$

$$T = 0 + 15^{1/2} \cos^{5}t dt$$

$$= \frac{1}{5} \frac{1}{2} \beta \left(\frac{1}{2}, \frac{3}{3}\right)$$

$$= \frac{8}{75}$$

Integral
$$= \left[t \left(-\frac{\cos t}{s} \right) \right]_{0}^{2}$$

Sol
$$T = \int_{0}^{\infty} x \int_{0}^{\infty$$

$$(0) \quad \overline{I} - \int \frac{n^{5}}{(2+3n)^{15}} dn = \int \frac{n^{5}}{(2+3n)^{15}} dn$$

$$pnt \quad \frac{3}{2}n = tan^{2} \partial \frac{n^{10}}{tdo n^{10}} \int \frac{n^{10}}{10} dn$$

$$T - \int \frac{n^{5}}{(2+3n)^{15}} dn$$

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