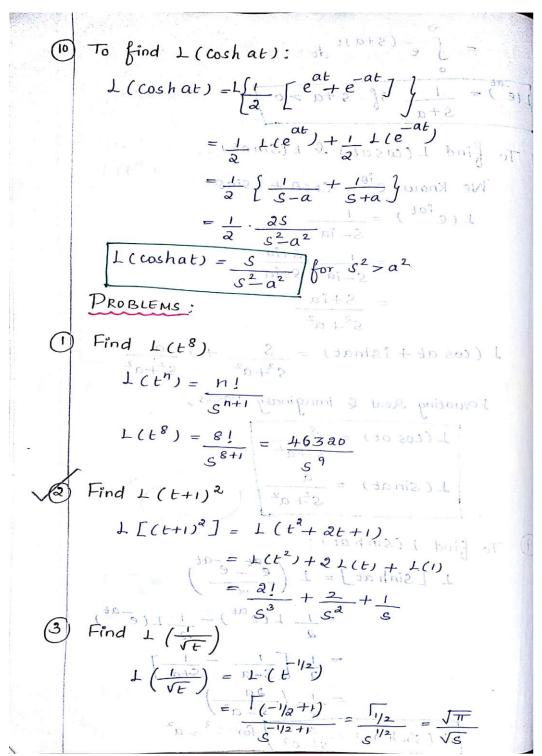




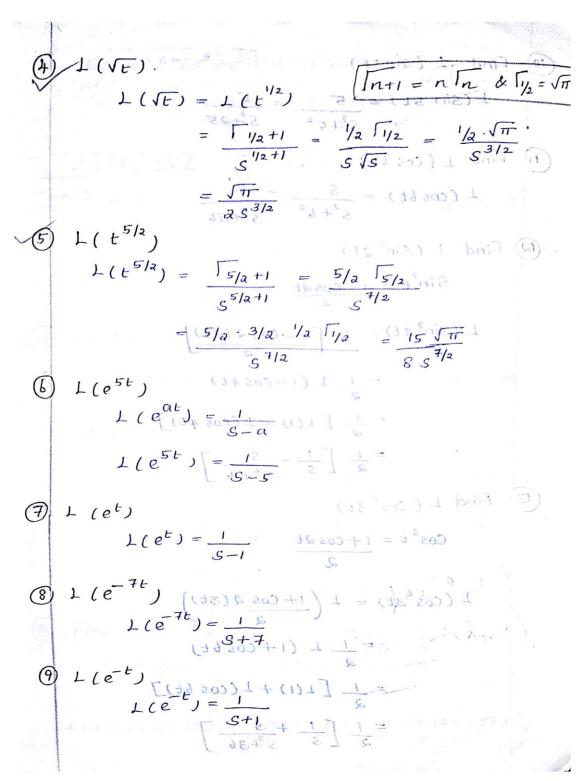
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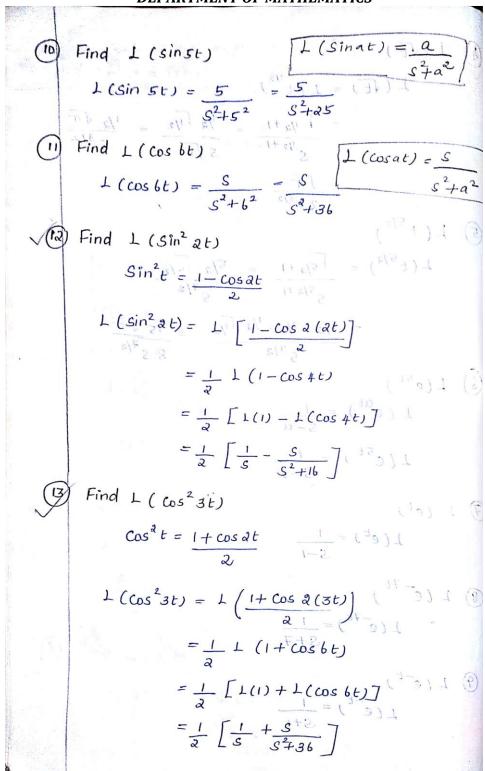






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(4) Find L (
$$\cos^3 at$$
) 1 ($\cos^3 0 + 3\cos 0$)

$$\cos^3 0 = \frac{1}{4} (\cos 30 + 3\cos 0)$$

$$= \frac{1}{4} \left\{ L(\cos 6t) + 3L(\cos 2t) \right\}$$

$$= \frac{1}{4} \left\{ \frac{S}{S^2 + 3t} + 3 \cdot \frac{S}{S^2 + 4} \right\}$$

$$= \frac{1}{4} \left\{ \frac{S}{S^2 + 3t} + \frac{3S}{S^2 + 4} \right\}$$
(5) Find L ($\sin^3 3t$)
$$Sin^3 0 = \frac{3\sin 0 - \sin 30}{4}$$

$$= \frac{1}{4} \left\{ \frac{3\sin 3t - \sin 3(3t)}{3\cos 3t} \right\}$$

$$= \frac{1}{4} \left\{ \frac{3\sin 3t - \sin 3(3t)}{3\cos 3t} \right\}$$

$$= \frac{1}{4} \left\{ \frac{3\cos 3t}{S^2 + 3^2} \right\} - \frac{9}{S^2 + 9^2} \right\}$$
(6) Find L ($\sin 2t \cos 3t$).
$$Sin A \cos B = \frac{\sin (A + B) + \sin (A - B)}{\sin (A + B) + \sin (A - B)}$$
1 ($\sin 2t \cos 3t$) = 1 $\left\{ \frac{\sin (A + B) + \sin (A - B)}{3\cos (A + B) + \sin (A + B)} \right\}$





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$$= \frac{1}{2} \{ L(Sin St) + L(Sin (-t) \} \}$$

$$= \frac{1}{2} \{ L(Sin St) - L(Sin t) \}$$

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