

$$5. \quad y_1 = t^2 \\ y_1' = 2t$$

$$y_2 = t^{-2} \\ y_2' = -2t^{-3}$$

$$W(t) = \begin{vmatrix} y_1 & y_2 \\ y_1' & y_2' \end{vmatrix} = y_1 y_2' - y_2 y_1'$$

$$= t^2(-2t^{-3}) - (t^{-2})(2t)$$

$$= -\frac{2}{t} - \frac{2}{t}$$

$$= -\frac{4}{t}$$

THIS IS NOT IDENTICALLY ZERO,  
SO  $y_1$  AND  $y_2$  FORM A  
FUNDAMENTAL SET OF SOLUTIONS