Class 9 – 16 – 50, 52, 57

50 $\xrightarrow[30\ m/s]{S}$ 352 Hz $\quad \xleftarrow[18\ m/s]{L}$? $= 352\left(\frac{344+18}{344-30}\right) = 406\ Hz$

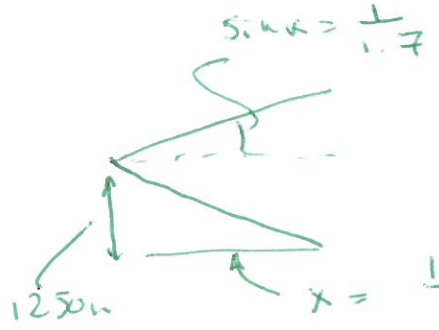
$\longrightarrow \quad \longrightarrow \quad 352\left(\frac{344-18}{344-30}\right) = 365\ Hz$

52 → beat = 6 ⇒ new freq = 266 : $266 = 260\ \frac{344}{344 - V}$

$1 - \frac{V}{344} = \frac{260}{266}$

$344\left(1 - \frac{260}{266}\right) = V = 7.76\ m/s$

57



$x = \frac{1250}{\tan\alpha} = 1.719 \times 10^3\ m$

shock moves @ speed of plane = $t = \frac{x}{V} = \frac{1.719 \times 10^3}{1.7\ 344}$

$= 2.945$

value @ min – add 3 zeros ⇒ .26