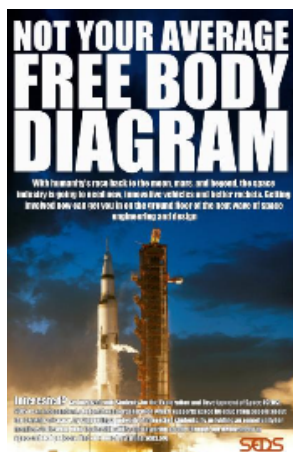
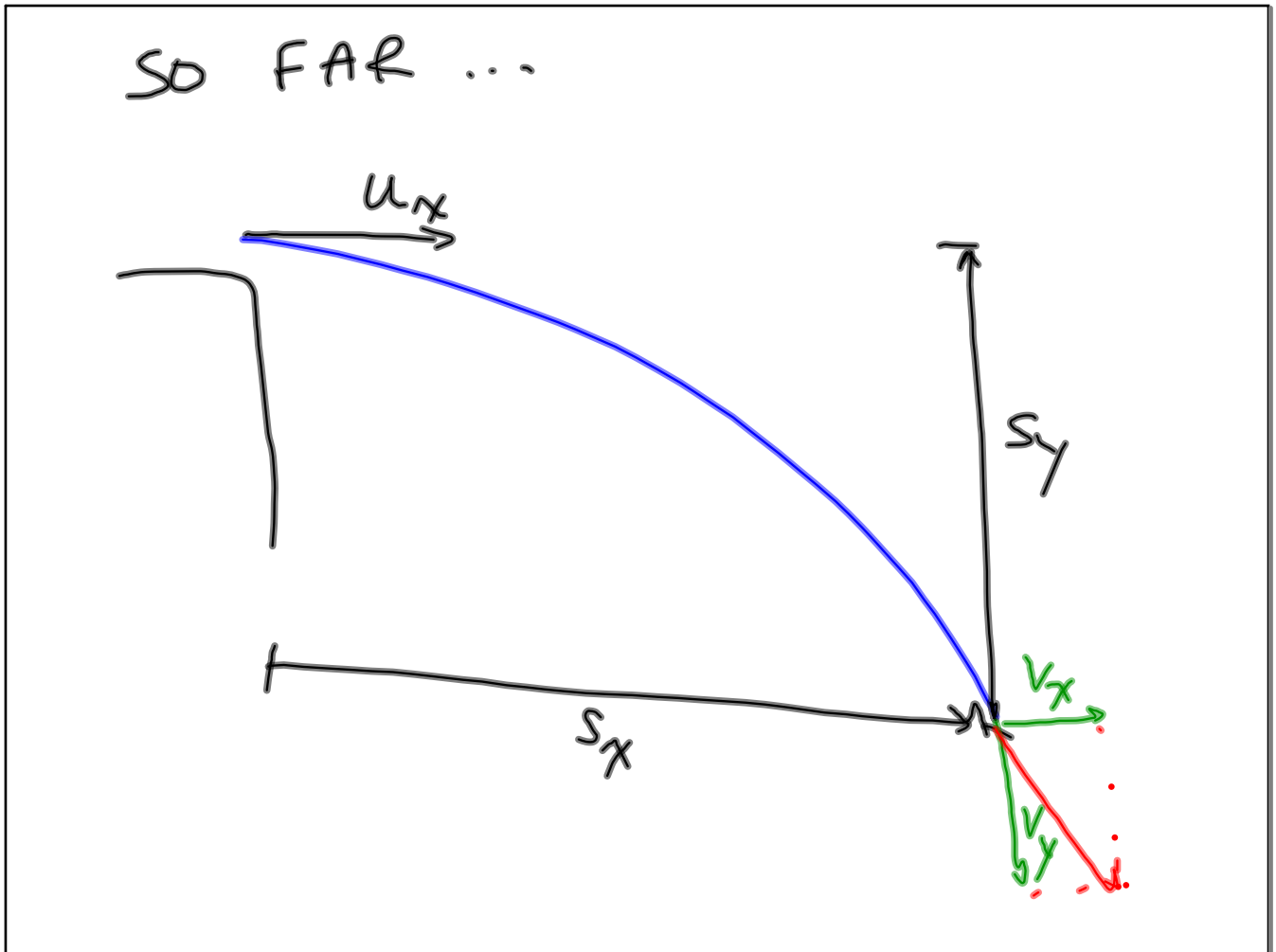


AP -you can go back to my room and sit in the back row to work on MP
-work together; if you get stuck, send someone over with some Qs
-we'll work Monday like before: start with Qs, then take HW Quiz in last 20'

IB -get your clicker
-lecture: General Projectile motion
-practice Bowman skills over the long weekend, tourney is next week





SO FAR ...

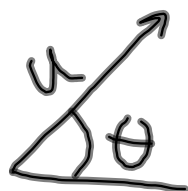
$$\begin{array}{c}
 s_x \\
 \begin{array}{c} \curvearrowright u_x \\ \curvearrowleft v_x \end{array} \\
 a_x = 0 \\
 t
 \end{array}$$

*

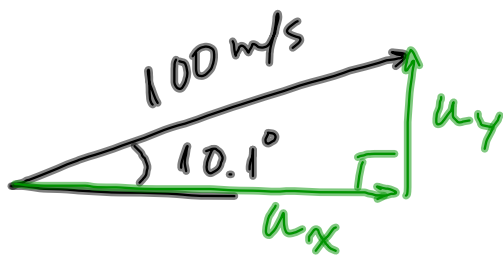
$$\begin{array}{c}
 s_y \\
 u_y = 0 \\
 v_y \\
 a_y = -9.81 \text{ m/s}^2 \\
 t
 \end{array}$$

X

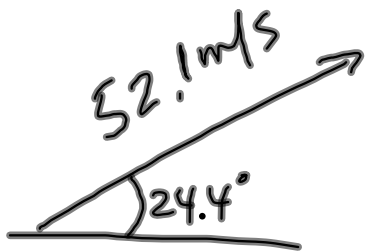
HOW DOES SHOOTING @ ANY θ
CHANGE THESE PROBLEMS?
(SEE ABOVE



* NEED TO DO SOME MORE
WORK TO GET u_x



$$u_x = ? = u \cos \theta = (100 \text{ m/s}) \cos 10.1^\circ = 98.5 \text{ m/s}$$
$$u_y = ? = u \sin \theta = (100 \text{ m/s}) \sin 10.1^\circ = 17.5 \text{ m/s}$$



$$u_x =$$
$$u_y =$$

100 m/s
 $\theta = 17.1^\circ$
 $V_y = 0$
 S_y
 S_x
 $u_x = 95.6 \text{ m/s}$
 $u_y = 29.4 \text{ m/s}$

RANGE
 $S_x =$
 $u_x = 95.6 \text{ m/s}$
 $v_x = 95.6 \text{ m/s}$
 $a_x = 0$
 $t = 5.99 \text{ s}$

$S_y = 44.1 \text{ m}$
 $u_y = 29.4 \text{ m/s}$
 $v_y = 0 \text{ @ HIGHEST PT.}$
 $a_y = -9.81 \text{ m/s}^2$
 $t = 5.99 \text{ s (x2)}$

TIME OF FLIGHT

FIND S_x ? CANT YET
 FIND S_y ? $v^2 = u^2 + 2as$
 $s = \frac{v^2 - u^2}{2a} = 44.1 \text{ m}$
 FIND t ? $v = u + at$
 $t = \frac{v - u}{a}$
 FIND S_x
 $u_x = \frac{S_x}{t}$
 $S_x = u_x t$