

$$\int_1^8 \int_0^2 x^2 y \, dy \, dx = \left(\int_1^8 x^2 \, dx \right) \left(\int_0^2 y \, dy \right)$$

$$\int_1^8 \left(\int_0^2 x^2 y \, dy \right) dx = \int_1^8 x^2 \left(\int_0^2 y \, dy \right) dx$$

$$= \left(\int_0^2 y \, dy \right) \left(\int_1^8 x^2 \, dx \right)$$

$$f(x,y) = x^2 y = g(x)h(y)$$

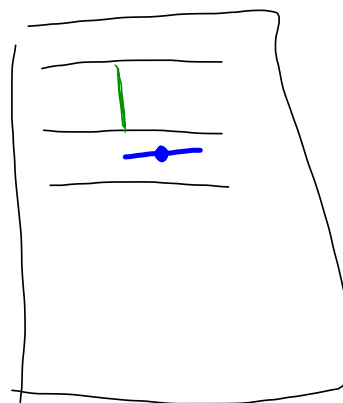
$$\int_0^8 \int_0^2 (x+y) dx dy$$

$$f(x,y) = g(x)h(y)$$

\bar{X} and \bar{Y} are independent

$$P(X \leq 30) = F(30)$$

\downarrow
 feet
 continuous \rightsquigarrow exponential



<u>Not touch</u>	<u>touch</u>
52	50
21	35
30	50
65	82
22	38
38	44
29	34
33	38
<hr/> 290	<hr/> 371

$$P(\text{touches}) = \frac{371}{661} = .561$$

$$\frac{2}{3} \stackrel{?}{=} 0.638 = \frac{2}{\pi}$$

