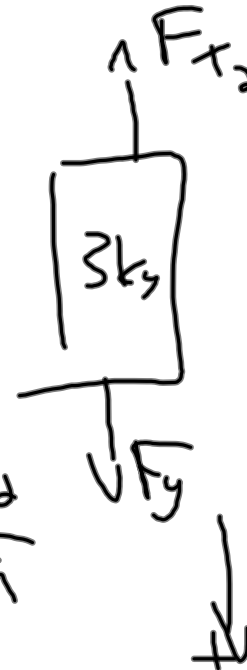


X	Y
F_{T1}	F_{T2}
	$-F_y$
$1a$	0

X	Y
$-F_{T1}$	F_{T2}
	$-F_y$
$2a$	0

X	Y
F_{T2}	F_y
	$-F_{T2}$
$3a$	0



$$F_{T1} = a$$

$$F_{T2} - F_{T1} = 2a$$

$$F_y - F_{T2} = 3a$$

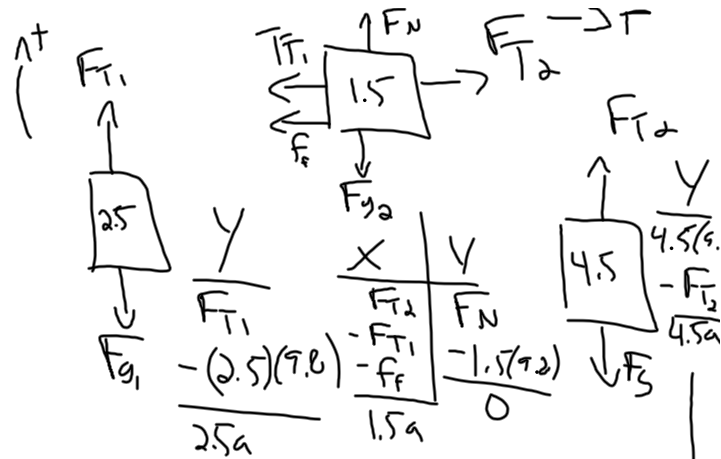
$$F_{T2} - a = 2a$$

$$3(9.8) - 3a = 3a$$

$$F_{T2} = 3a$$

$$3(9.8) = 6a$$

$$a = \frac{9.8}{2} = 4.9 \text{ m/s}^2$$



$$F_{T1} - 24.5 = 2.5a \quad F_{T2} - F_{T1} - f_f = 1.5a$$

$$f_f \leq \mu F_N$$

$$F_{N2} = 14.7$$

$$44.1 - F_{T2} = 4.5a$$

$$F_{T2} = 44.1 - 4.5a$$

$$F_{T1} = 24.5 + 2.5a$$

$$44.1 - 4.5a - 24.5 - 2.5a - \mu(14.7) = 1.5a$$

$$19.6 - 6.5a - 14.7\mu = 1.5a$$

$$19.6 - 14.7\mu = 8a$$

$$2.45 - 1.83\mu = a$$

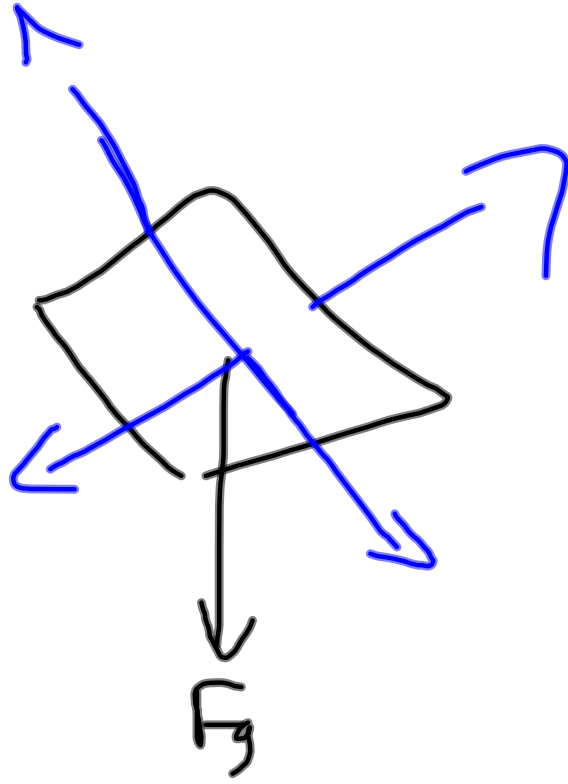
$$2.45 - .45 = a$$

$$a = 2 \text{ m/s}^2$$

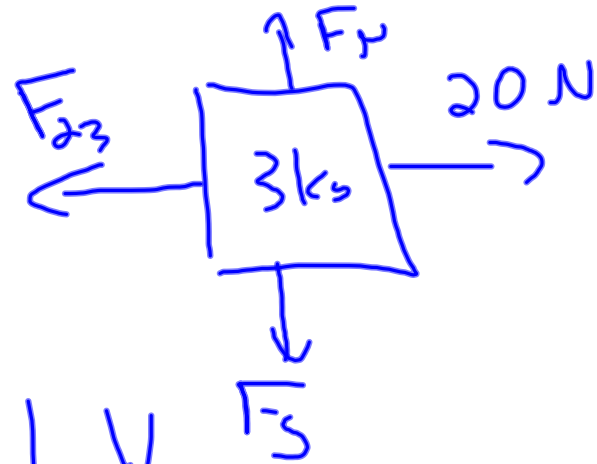
$$3.2 - f_f = 8a$$

$$f_{s, \max} = (3) \cdot 14.7 = 4.41$$

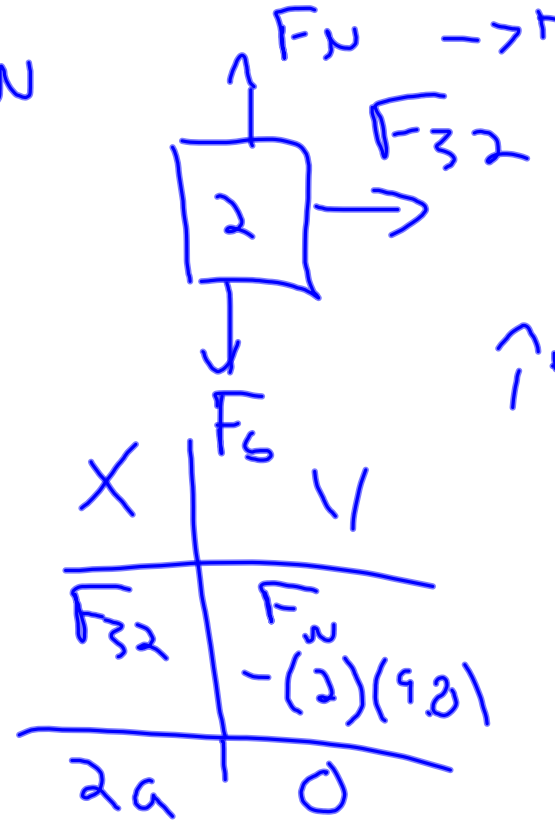
$$f_k$$



$$\frac{x}{4}$$



X	Y
20 N	F_N
$-F_{23}$	$-3(9.8)$
$3a$	0



X	Y
F_{32}	F_N
	$-(2)(9.8)$
$2a$	0

$$F_{net} = 20 N = 5a$$

$$a = 4 \text{ m/s}^2$$

$$F_{\text{net}} = 3(9.81) =$$
$$\approx 29.4 \text{ N}$$

$$\frac{29.4 = 6a}{6 \quad 6}$$
$$a = 4.9$$