Al November 03 Model Studions	3 a = 0 (constant speed).
	PLAJO Y R U= 45
$ \begin{array}{c} D \\ a \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$	$R_{C30} = \frac{Fr}{Fr}$ $Fr = \mu R$
$u_{A} = -q_{1}g \qquad 0 = u^{2} + 2x - q_{1}g + 40$	50g Fr = % R
$\begin{array}{c} T : \underline{\mu} \\ t = 1 \end{array} \qquad \qquad$	Vertically: R = Psin30 + 50g
b) From starts to flash.	
u = 28	$Fr = \frac{3}{28}R = \frac{3}{28}(P_{s,n}30 + 60g)$
v= \ S= ut + % at "	$\therefore Fr = \frac{3f}{30} + 30g$ -(1)
$a = -9.8$ $0 = 28t - 4.9t^{2}$	
a = 0 $b(4 - 28) = 0$	Horizontally: RF = ma
$t = t$ $t = 0$ or $t = \frac{42}{49} = \frac{5.713}{465m}$	$P\cos 30 - Fr = 50 \times 0$
at start at finish	\Rightarrow $Pcop_30 = Fr \qquad -3$
1	Let $\bigcirc = $ Roo 30 = $\frac{3P}{10} + 30q$
	(x10) 10 Paces 30 = 3P + 300g
a) BETERE 200043 mkg ->> + ve.	P(10cep30 - 3) = 300q
F F	$P = 300q = 519.4 \approx 519.N$
$\rightarrow \gamma_3 \rightarrow \gamma_4 = 3.5 \text{ mm}^{-1}$	10co=30 - 3
AFTER 2000ig M kg	Quard
	(r) yead a) as b) Distance = area under graph
Impulse of Ton S is in negative direction:	a) as b) Distance = curea under graph = 4 km.
I = 2000 v - 2000 x 12 = -28,800	
2000, - 24,000 28,500	$\frac{1}{2} \times 25 \times (1 + 120) = 4000$
2000V2 = -4800	T+ 120 = 320
G = - 24mo-1	T = 200 s
Speed of S = <u>Mars</u>	
6) Qirection of S is WEST.	c) When the car has bravelled 15 km (point t. on the graph):
c) Conservation of momentum: m, u, + m_2 u_2 = m, v, + m_2 v_2	$4(25)(t_1 + (t_1 - 20)) = 4 \times 25 \times (2t_1 - 2\delta) = 1500$
$\implies 2000 \times 12 - 6m = -2.4 \times 2000 + 3.6 m$	\Rightarrow 2t, -20 = 120 t, = 70s
$\Rightarrow 24000 - 6m = 3.6m - 4800$	The motorbike set of 10s later so has been travelling 70-10= 605
\Rightarrow 28800 = 9.6m	
-> m = 3000 kg	d) $u = 0$ (u+x)
the second s	$\begin{array}{ccc} & & & \\ & & & & \\ & & & \\ & & & & \\ & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ &$
	$a = \sum_{i=1}^{n} 1500 = \left(\frac{0+v}{2}\right) \times 60$
	$s = 1500 \qquad 25 = \frac{v}{2} \implies v = \underline{50 m_0}^{-1}$ $t = 60$
6	0 B In
a) $y = 3z - 5j$, $y = y + ab$	2 Por ta
	D R ATT Ja
a) $\chi = 3\xi - 5\xi$ $\chi = -5\xi + 11\xi \implies \chi = \chi + \xi\xi$	T ta
a) $y = 3z - 5j$, $z = y + ab$	$\begin{array}{c} \hline \\ \hline $
a) $\begin{array}{l} y = 3k - 5j, \qquad \chi = y_k + a_k k \\ y = -5k + 11j, \qquad \Longrightarrow p_k = \frac{y_k - y_k}{k} \\ a_k = a_k \\ z_k = -k \\ k = 4 \end{array}$ $= \left(\underbrace{-5k + 11j}_{4} - (3j - 5j) \right) \\ = 4 \end{array}$	$\begin{array}{c} \hline \\ \hline $
a) $\begin{array}{l} y = 3k - 5j, \qquad y = y_k + g_k k \\ y = -5k + 11j, \qquad \Longrightarrow g_k = \frac{y_k - g_k}{k} \\ g_k = g_k \\ g_k = y_k \\ g_k = y_k \\ k = 4 \end{array} = \frac{(-5k + 11j) - (3j - 5j)}{4} \\ = -\frac{g_k + 16j}{4} = -\frac{2j + 4j}{4} mo^{-4} \end{array}$	=> 0.49 -T = 0.4×/59
a) $\begin{array}{l} y = 3k - 5j, \qquad y = y + kt \\ y = -5k + 11j, \qquad \Rightarrow k = \frac{y - y}{t} \\ k = k \\ z = -5k + 10j, \qquad = \frac{y - y}{t} \\ z = -\frac{y}{t} + 10j, \qquad = -\frac{2k + 4j}{t} mo^{-1} \end{array}$ b) F = ma	$\Rightarrow 0.4g - T = 0.4 \times \& g$ $\Rightarrow 0.4g - T = 0.08g$
a) $\begin{array}{l} y = 3k - 5j, \qquad \chi = y_k + g_k t \\ y = -5k + 11j, \qquad \Longrightarrow g_k = \frac{\chi - y_k}{t} \\ g_k = g_k \\ g_k = \gamma \\ t = 4 \end{array} = \left(\underbrace{-g_k + 10j, -(3k - 5j)}_{H} \right) \\ t = -\frac{g_k + 10j, \qquad = -2k + 4j, \qquad mo^{-4}}{H} \end{array}$	=> 0.49 -T = 0.4× % 9
a) $\begin{array}{l} y = 3k - 5j, \qquad y = y_{1} + k_{1}k \\ y = -5j, + 11j, \qquad \Rightarrow g = \frac{y_{1} - y_{2}}{k} \\ g = g, \qquad $	$\Rightarrow 0.49 - T = 0.4 \times \& g \\ \Rightarrow 0.49 - T = 0.08g$ b) T = 0.4g - 0.08g = 0.32g = <u>3.136 N</u>
a) $\begin{array}{l} y = 3k - 5j, \\ y = -5j, + 11j, \\ g = 2k, \\ z = N, \\ k = k, \end{array}$ b) $\begin{array}{l} y = 0, \\ z = N, \\ k = k, \end{array}$ c) $\begin{array}{l} y = 0, \\ z = N, \\ k = k, \end{array}$ b) $\begin{array}{l} z = m g, \\ z = N, \\ k = k, \end{array}$ c) $\begin{array}{l} y = y, \\ z = N, \\ k = k, \end{array}$ c) $\begin{array}{l} y = y, \\ z = N, \\ k = k, \end{array}$ c) $\begin{array}{l} y = y, \\ z = N, \\ k = k, \end{array}$ c) $\begin{array}{l} y = y, \\ z = N, \\ k = k, \end{array}$ c) $\begin{array}{l} y = y, \\ z = N, \\ k = k, \end{array}$ c) $\begin{array}{l} y = y, \\ z = N, \\ k = k, \end{array}$ c) $\begin{array}{l} y = y, \\ z = N, \\ k = k, \end{array}$ c) $\begin{array}{l} y = y, \\ z = N, \\ k = k, \end{array}$ c) $\begin{array}{l} y = y, \\ z = N, \\ k = k, \end{array}$ c) $\begin{array}{l} y = y, \\ z = N, \\ k = k, \end{array}$ c) $\begin{array}{l} y = y, \\ z = k, \end{array}$ c) $\begin{array}{l} y = y, \end{array}$ c) $\begin{array}{l} y = y, \end{array}$ c) $\begin{array}{l} y = y, $	$\Rightarrow 0.49 - T = 0.4 \times \& g \\ \Rightarrow 0.49 - T = 0.08g$ b) T = 0.4g - 0.08g = 0.32g = <u>3.136 N</u>
a) $\begin{array}{l} \begin{array}{l} \psi = 3k - 5j, \\ \chi = -5j, + 11j, \\ \varphi = 2k, \\ z = -2k, + 12j, \\ z = -2k, \\ z$	$\Rightarrow 0.4g - T = 0.4 \times \& g \\ \Rightarrow 0.4g - T = 0.08g \\ \Rightarrow 0.4g - T = 0.08g \\ \Rightarrow 0.32g = 3.136 N \\ c)(R): T - ngsin 30 = m \times \& g \\ mg \\ \Rightarrow 0.4g - 0.08g \\ \Rightarrow 0.32g = 3.136 N \\ \Rightarrow 0.4g - 0.08g \\ \Rightarrow 0.32g = 3.136 N \\ \Rightarrow 0.4g - 0.08g \\ \Rightarrow 0.32g = 3.136 N \\ \Rightarrow 0.4g - 0.08g \\ \Rightarrow 0.4g $
a) $\begin{array}{l} y = 3k - 5j, \\ y = -5k + 11j, \\ y = -5k + 11j, \\ y = 2k, \\ z = 2k, \\ z = -k, \\ z = -k,$	$\Rightarrow 0.4g - T = 0.4 \times \& g \\ \Rightarrow 0.4g - T = 0.08g \\ \Rightarrow 0.4g - T = 0.08g \\ \Rightarrow 0.32g = 3.136 N \\ c)(R): T - ngsin 30 = m \times \& g \\ mg \\ \Rightarrow 0.4g - 0.08g \\ \Rightarrow 0.32g = 3.136 N \\ \Rightarrow 0.4g - 0.08g \\ \Rightarrow 0.32g = 3.136 N \\ \Rightarrow 0.4g - 0.08g \\ \Rightarrow 0.32g = 3.136 N \\ \Rightarrow 0.4g - 0.08g \\ \Rightarrow 0.4g $
a) $\begin{array}{l} \begin{array}{l} u = 3k - 5j \\ y = -5j + 11j \\ y = -5j + 11j \\ y = 2 \\ z = \infty \\ z = \infty \\ z = \infty \\ z = \infty \end{array}$ $\begin{array}{l} = \left(\frac{5k}{2} + 11j\right) - \left(3j - 5j\right) \\ = \left(\frac{5k}{2} + 12j\right) \\ + 12k \\ z = -\frac{5k}{4} + 16j \\ + 12k \\ z = -\frac{5k}{4} + 16j \\ + 12k \\ z = -\frac{5k}{4} + 12j \\ z = -$	$\Rightarrow 0.49 - T = 0.4 \times \& g \\ \Rightarrow 0.49 - T = 0.08g$ b) T = 0.4g - 0.08g = 0.32g = <u>3.136 N</u>
a) $\begin{array}{l} y = 3 \pm -5 \pm \dots \\ y = -5 \pm + 11 \pm \dots \\ y = -5 \pm + 11 \pm \dots \\ y = 2 \\ z = \sum \\ z = - \\ z = + \\ z = + \\ z = + \\ z = - \\ z = - \\ z = - \\ z = - \\ z = + 16 \pm \\ z = - 2 \pm + 16 \pm \\ z = - 2 \pm + 4 \pm \\ z = - 2 \pm + 2 \pm + 2 \pm + 2 \pm \\ z = - 2 \pm + 2 \pm + 2 \pm + 2 \pm \\ z = - 2 \pm + 2 \pm + 2 \pm + 2$	$\Rightarrow 0.49 - T = 0.4 \times 89$ $\Rightarrow 0.49 - T = 0.089$ b) $T = 0.49 - 0.089 = 0.329 = 3.136 \text{ N}$ c) (A): $T - \text{mgain 30} = \text{m x } 89 \text{ mg}$ $3.136 - \text{mgain 30} = \frac{5}{59}$ $\Rightarrow 3.136 = \text{mg(gsin 30 + 95)}$ $\Rightarrow \text{m} = \frac{3}{9} \text{mgs} - \frac{3}{25} \text{ gep}$
a) $\begin{array}{l} \begin{array}{l} \begin{array}{l} \mu = 3_{k} - 5_{k} & \chi = \mu + 2_{k} \\ \chi = -5_{k} + 11_{k} & \Longrightarrow \\ \varrho = 2_{k} \\ z = \infty \\ z = \infty \\ z = -1 \end{array} \qquad $	$\Rightarrow 0.49 - T = 0.4 \times 89$ $\Rightarrow 0.49 - T = 0.089$ b) $T = 0.49 - 0.089 = 0.329 = 3.136 \text{ N}$ c) (A): $T = mgain 30 = m \times 89 \text{ mg}$ 3.136 = mgain 30 = 59 $\Rightarrow 3.136 = m(gain 30 + 95)$ $\Rightarrow m = \frac{3.136}{9} = \frac{3.136}{32} \text{ GeD}$ d) No friction on the publicy.
a) $u = 3k - 5j$ $y = -5k + 11j$ $\Rightarrow 2 = \frac{y - 4k}{2}$ a = 2k b = 4 $b) = \frac{1}{2} = \frac{1}{2k} + \frac{1}{4} = -\frac{2k}{4} = -\frac{2k}{4} + \frac{1}{4} = -\frac{2k}{4} + \frac{1}{4} = -\frac{2k}{4} + \frac{1}{4} = -\frac{2k}{4} = -\frac{2k}{$	$\Rightarrow 0.49 - T = 0.4 \times 89$ $\Rightarrow 0.49 - T = 0.089$ b) $T = 0.49 - 0.089 = 0.329 = 3.136 N$ c) (A): $T - mgsin 30 = m \times 89 mg$ 3.136 - mgsin 30 = 595 $\Rightarrow 3.136 = m(gsin 30 + 595)$ $\Rightarrow n = \frac{3.136}{98000000000000000000000000000000000000$
a) $\begin{array}{l} y = 3 \pm -5 \pm \dots \\ y = -5 \pm + 11 \pm \dots \\ y = -5 \pm + 11 \pm \dots \\ y = -2 \pm \dots \\ z = 2 \\ z = -1 \\ z = -1 \end{array}$ $\begin{array}{l} = \left(-\frac{5 \pm + 11 \pm 1 - (3 \pm -5 \pm)}{2} \right) \\ = -\frac{5 \pm + 16 \pm 1}{4} \\ = -\frac{2 \pm + 16 \pm 1}{4} \\ = -\frac{2 \pm + 4 \pm 1}{4} \\ = -\frac{2 \pm + 4 \pm 1}{4} \\ \end{array}$ b) $\begin{array}{l} E = m \cdot 2 \\ = 3 \times (-2 \pm + 4 \pm) \\ = -\frac{6 \pm + 12 \pm 1}{4} \\ \end{array}$ $\begin{array}{l} IE = \sqrt{6^{2} + 12^{2}} \\ = \sqrt{180} \\ = -9 \pm + 12 \pm 1 \\ \end{array}$ c) When $t = 4$, what is $y^{-7} \\ y = (3 \pm -5 \pm) + (-2 \pm + 4 \pm) \times 6 \\ = -9 \pm + 19 \pm 1 \\ \end{array}$ 3s after E is removed: displacement - velocity x time \\ = (-9 \pm + 19 \pm 1) \times 3 \\ = -31 \pm +57 \pm 1 \\ \end{array} Bostion vector of P ab this point = $\left(6 \pm -29 \pm 1 + (-27 \pm + 57 \pm)\right)$	$\Rightarrow 0.49 - T = 0.4 \times 89$ $\Rightarrow 0.49 - T = 0.089$ b) $T = 0.49 - 0.089 = 0.329 = 3.136 \text{ N}$ c) (A): $T - \text{mgsin30} = \text{mx 8g mg}$ $3.136 - \text{mgsin30} = \frac{1}{95}$ $\Rightarrow 3.136 = \frac{m(gsin30 + 95)}{3000055} = \frac{1}{235} \text{ GeO}$ d) No friction on the pulley. Tension is equal throughout the string. e) $u = 0$ $v^{\pm} = u^{2} + 2as$
a) $y = 3z - 5z$ $y = -5z + 11j$ $\Rightarrow y = y + zt$ z = 2 z = 2 $z = -5z + 11j$ $\Rightarrow y = -\frac{y - y}{z}$ $z = -5z + 11zj$ $\Rightarrow (-3z - 5z)$ $z = -\frac{y}{z} + 16zj$ $= -\frac{2z + 4z}{4}$ mo ⁻² b) $E = m z$ $= 3 \times (-2z + 4z)$ $= -6z + 12z N$ $IEI = \sqrt{6^2 + 12^2} = \sqrt{180} = \frac{13 \cdot 4 \cdot N}{4}$ c) When $t = 4$, what is y^{-2} $y = (3z - 5z) + (-2z + 4z) \times 6$ = -9z + 19z 3z after E is removed: displacement - velocity x time $= (-9z + 19z) \times 3$ = -3bz + 57z	$\Rightarrow 0.49 - T = 0.4 \times 89$ $\Rightarrow 0.49 - T = 0.089$ b) $T = 0.49 - 0.089 = 0.329 = 3.136 \text{ N}$ c) (A): $T - \text{mgain 30} = \text{m } \times 89 \text{ mg}$ $3.136 - \text{mgain 30} = \frac{9}{95}$ $\Rightarrow 3.136 = \text{m}(gsin 30 + 95)$ $\Rightarrow \text{m} = \frac{3.136}{9} \text{m}(25, 35) = \frac{9}{35} \text{ GeD}$ d) No. friction on the pulley. Tension is equal throughout the string. e) $u = 0$ $y^{2} = u^{2} + 2u^{2}$ $y = y^{2} = 0^{2} + 2 \cdot 89 \times 1$
a) $\begin{array}{l} y = 3 \pm -5 \pm \dots \\ y = -5 \pm +11 \pm \dots \\ y = -5 \pm +16 \pm \dots \\ y = -\frac{5 \pm +16 \pm 1}{4} = -\frac{-2 \pm +4 \pm 1}{4} - \frac{1}{4} - \frac{1}{4} \\ \end{array}$ b) $\begin{array}{l} F = m g_{\pm} = -\frac{5 \pm +16 \pm 1}{4} = -\frac{2 \pm +4 \pm 1}{4} - \frac{1}{4} - \frac{1}{4} \\ = -\frac{5 \pm +16 \pm 1}{4} = -\frac{2 \pm +4 \pm 1}{4} - \frac{1}{4} \\ \end{array}$ b) $\begin{array}{l} F = m g_{\pm} = -\frac{5 \pm +12 \pm 1}{4} \\ = -\frac{5 \pm +16 \pm 1}{4} = -\frac{1}{4} - \frac{1}{4} \\ \end{array}$ c) When $t = k$, what is y ? $\begin{array}{l} \chi = (3 \pm -5 \pm 1) \pm (-2 \pm +4 \pm 1) \times k \\ = -9 \pm \pm 19 \pm 10 \\ = -9 \pm \pm 19 \pm 10 \\ \end{array}$ 3s after E is removed: displacement - velocity x time $= (-9 \pm +19 \pm 10 \\ = -9 \pm \pm 19 \pm 10 \\ = -9 \pm \pm 10 \\ \pm 57 \pm 10 \\ \end{array}$ Restron vector of P at this point = $(6 \pm -29 \pm 1) + (-27 \pm 57 \pm 1) \\ = -21 \pm \pm 28 \pm 10 \\ \end{array}$	$\Rightarrow 0.49 - T = 0.4 \times \& g$ $\Rightarrow 0.49 - T = 0.08g$ b) $T = 0.4g - 0.08g = 0.32g = 3.136 \text{ N}$ c) (A): $T - \text{mgain 30} = \text{m } \times \& g \text{ mg}$ $3.136 - \text{mgain 30} = \frac{1}{92}$ $\Rightarrow 3.136 = \text{m}(gsin 30 + 92)$ $\Rightarrow \text{m} = \frac{3.136}{36.0837} = \frac{1}{232} \text{ gev}$ d) No friction on the pulley. Tension is equal throughout the string. e) $u = 0$ $v^{\pm} = u^{2} + 2as$ $v = v$ $= 0^{2} + 2 \times \& g \times 1$ a = & g = & & g
a) $\begin{array}{l} y = 3 \pm -5 \pm \dots \\ y = -5 \pm + 11 \pm \dots \\ y = -5 \pm + 11 \pm \dots \\ y = -2 \pm \dots \\ z = 2 \\ z = -1 \\ z = -1 \end{array}$ $\begin{array}{l} = \left(-5 \pm + 11 \pm \right) - \left(-3 \pm -5 \pm \right) \\ = \left(-5 \pm + 11 \pm \right) - \left(-3 \pm -5 \pm \right) \\ = -8 \pm + 16 \pm \dots \\ + 16 \pm 10^{-4} \end{array}$ b) $\begin{array}{l} E = m \cdot 2 \\ = 3 \times \left(-2 \pm + 4 \pm \right) \end{array}$ $= -\frac{8 \pm + 16 \pm 1}{4} = -\frac{-2 \pm + 4 \pm 1}{4} - \frac{16 \pm 12 \pm 1}{4} \end{array}$ b) $\begin{array}{l} E = m \cdot 2 \\ = 3 \times \left(-2 \pm + 4 \pm \right) \end{array}$ $\begin{array}{l} = -8 \pm + 16 \pm 12 \pm 12 \pm 12 \\ = -8 \pm 16 \pm 12 \pm 12 \pm 12 \\ = -8 \pm 16 \pm 12 \pm 12 \\ = -9 \pm 12 \pm 12 \pm 12 \\ = -9 \pm 12 \pm 12 \pm 12 \\ = -9 \pm 12 \pm 12 \pm 12 \\ = -9 \pm 12 \pm 12 \pm 12 \\ = -9 \pm 12 \pm 12 \pm 12 \\ = -9 \pm 12 \pm 12 \pm 12 \\ = -9 \pm 12 \pm 12 \pm 12 \\ = -9 \pm 12 \pm 12 \pm 12 \\ = -9 \pm 12 \pm 12 \pm 12 \\ = -9 \pm 12 \pm 12 \pm 12 \\ = -9 \pm 12 \pm 12 \pm 12 \\ = -9 \pm 12 \pm 12 \pm 12 \\ = -9 \pm 12 \pm 12 \pm 12 \\ = -9 \pm 12 \pm 12 \pm 12 \\ = -9 \pm 12 \pm 12 \pm 12 \\ = -9 \pm 12 \pm 12 \pm 12 \pm 12 \\ = -9 \pm 12 \pm 12 \pm 12 \pm 12 \pm 12 \\ = -9 \pm 12 \pm 1$	$\Rightarrow 0.449 - T = 0.4\times & g$ $\Rightarrow 0.49 - T = 0.08g$ b) $T = 0.49 - 0.08g = 0.32g = 3.136 \text{ N}$ c) (A): $T = \text{mgain 30} = \text{m} \times & \text{gg}_{\text{mg}}$ $3.136 = \text{mgain 30} = \frac{1}{9}$ $\Rightarrow 3.136 = \text{mg(gsin 30 + 9g)}$ $\Rightarrow \text{m} = \frac{3.136}{9} \text{mg}$ $3.136 = \frac{1}{32} \text{ geve}$ d) No. friction on the pulley. Tension is equal throughout the string. e) $u = 0$ $y^{2} = u^{2} + 2an$ $y = y^{2} = 0^{2} + 2 \times & g \times 1$
a) $\psi = 3\pm -5\pm$ $\chi = -5\pm +11\pm$ $\varphi = 2$ $z = \infty$ $z = \infty$ $z = -\frac{5}{2} + 11\pm$ $z = -\frac{5}{2} + \frac{5}{2} + \frac{5}{2}$	$\Rightarrow 0.49 - T = 0.4 \times 29$ $\Rightarrow 0.49 - T = 0.089$ $\Rightarrow 0.49 - T = 0.089$ $\Rightarrow 0.49 - T = 0.089$ $\Rightarrow 0.136 = m \times 89 mg$ $\Rightarrow 3.136 = m(gsin 30 = 5.95)$ $\Rightarrow 3.136 = m(gsin 30 + 5.95)$ $\Rightarrow m = \frac{3.136}{9.8067.32} = \frac{1.32}{1.32} 8.652$ d) No. Inchor on the pulley. Tension is equal throughout the string. $\Rightarrow 0 = 0 v^{2} = u^{2} + 2.89 \times 1$ $u = 0 v^{2} = u^{2} + 2.89 \times 1$ $u = \frac{3}{9} = \frac{3}{89} = \frac{1.98}{9} ma^{-1}$
a) $ \begin{array}{lllllllllllllllllllllllllllllllllll$	$\Rightarrow 0.49 - T = 0.4 \times 89$ $\Rightarrow 0.49 - T = 0.089$ $\Rightarrow 0.49 - T = 0.089$ $\Rightarrow 0.49 - T = 0.089$ $\Rightarrow 0.136 - mgain 30 = m \times 89 mg$ $\Rightarrow 3.136 - mgain 30 = 95)$ $\Rightarrow 3.136 = m(gain 30 + 95)$ $\Rightarrow m = \frac{3.136}{3.136 \times 32} = \frac{1.35}{3.25} \text{ GeD}$ d) No friction on the pulley. Tension is equal throughout the string. e) $u = 0$ $v^2 = u^2 + 2as$ $v = v$ $= \frac{1.9}{2} \times 2 \times 8g \times 1$ $a = 8g = \frac{3}{2} \times 9$ $8 = 1$ $\Rightarrow v = 1.98 ms^{-1}$ t = 1 f) Tension is promoved after 1 m of neovement
a) $\begin{array}{l} y = 3\pm -5j, \\ y = -5\pm +1ij, \\ y = -5\pm +1ij, \\ y = 2k, \\ z = 2k, \\ z = -5k, \\ z = -2k, \\ z = -2k+ 4ij, \\ z = -2k+ 5ij, \\ z = -2k+ 2kj, \\ $	$\Rightarrow 0.44 - T = 0.4 \times 29$ $\Rightarrow 0.49 - T = 0.089$ $\Rightarrow 0.49 - T = 0.089$ $\Rightarrow 0.49 - T = 0.089$ $\Rightarrow 0.136 - mg in 30 = m \times 89 mg$ $\Rightarrow 3.136 - mg in 30 = 9.95)$ $\Rightarrow 3.136 = m(g in 30 + 9.95)$ $\Rightarrow n = \frac{3.19}{98.000} = -\frac{19.35}{32} = \frac{19.35}{32} = \frac{19.35}{32}$ $\Rightarrow 0.4 = 0 \qquad y = 1.28 \text{ m}^{-1}$ $\Rightarrow 1 = 0 \qquad y = 1.98 \text{ m}^{-1}$ $\Rightarrow 1 = 9 \qquad y = 1.98 \text{ m}^{-1}$ f) Tension is keneved after 1 m of neversient. Totalculate the new acceleration: -nignin 30 = ma
a) $\psi = 3\pm -5\pm$ $\chi = -5\pm +11\pm$ $\Rightarrow \psi = \psi \pm \pm \pm$ $\psi = 2$ z = 2 $z = -5\pm +11\pm$ $\Rightarrow \psi = \frac{\chi - \psi}{2}$ $z = -5\pm +11\pm$ $\Rightarrow \psi = \frac{\chi - \psi}{2}$ $z = -5\pm +11\pm$ $= -\frac{2\pm +4\pm}{4}$ mo ⁻⁴ b) $E = m\psi$ $= 3\times(-2\pm +4\pm) = -\frac{6\pm +12\pm}{4}$ N $ E = \sqrt{6^{2} + 12^{2}} = \sqrt{180} = \frac{13 \cdot 4 \cdot N}{4}$ c) When $t = \psi$, what is χ^{7} $\chi = (3\pm -5\pm) + (-2\pm +4\pm) \times 6$ $= -9\pm +19\pm$ 3s after E is removed: displacement - velocity \times time $= (-9\pm +19\pm) \times 3$ $= -31\pm +57\pm$ Bation vector of P at the point = $(6\pm -29\pm) + (-27\pm +57\pm)$ $\psi = -21\pm \pm 28\pm$ Detraice $eg = 1 \xi = \sqrt{21^{2} + 28^{2}} = 35 m$ (a) $\frac{\pi}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$	$\Rightarrow 0.449 - T = 0.4 \times 29$ $\Rightarrow 0.49 - T = 0.089$ b) $T = 0.49 - 0.089 = 0.329 = 3.136 \text{ N}$ c) (A): $T - \text{mgain 30} = \text{m} \times 89 \text{ mg}$ $3.136 - \text{mgain 30} = \frac{9}{95}$ $\Rightarrow 3.136 = \frac{3.19}{95} \text{ m} = \frac{9}{35} \text{ gen}$ A) No friction on the pulley. Tension is equal throughout the string. e) $u = 0$ $v^{2} = u^{2} + 2as$ $v = v$ $= 0^{2} + 2 \times 8g \times 1$ $a = \frac{8}{29} = \frac{8}{29}$ $s = 1 \Rightarrow v = 1.98 \text{ ma}^{-1}$ $t = \sqrt{2}$ f) Tervian is removed after 1 m of suprement. To calculate the new coefficient: $-\text{mgain 30} = \text{ma}$ $(m = \frac{18}{29})$ $a = \frac{2}{39}$
a) $\psi = 3\pm -5\pm$ $\chi = -5\pm +11\pm$ $\Rightarrow \psi = \chi + \pm \pm$ $\psi = 2$ $z = \chi$ $z = \chi + 16\pm$ $z = -\frac{2\pm +4\pm}{4}$ mo ⁻⁴ b) $E = m\psi$ $= 3\times(-2\pm +4\pm)$ $= -\frac{2\pm +4\pm}{4}$ mo ⁻⁴ $= -\frac{3\times(-2\pm +4\pm)}{4}$ $= -\frac{2\pm +4\pm}{4}$ mo ⁻⁴ $= -\frac{3\times(-2\pm +4\pm)}{4}$ $= -\frac{2\pm +4\pm}{4}$ mo ⁻⁴ b) $E = m\psi$ $= 3\times(-2\pm +4\pm)$ $= -\frac{2\pm +4\pm}{4}$ $= -\frac{2}{4}$ $= -\frac{2}{4}\pm 4\pm$ $= -\frac{2}{4}\pm$ $= -\frac{2}{4$	$\Rightarrow 0.44 - T = 0.4 \times 29$ $\Rightarrow 0.49 - T = 0.089$ $\Rightarrow 0.49 - T = 0.089$ $\Rightarrow 0.49 - T = 0.089$ $\Rightarrow 0.136 - mgsin 30 = 52$ $\Rightarrow 3.136 - mgsin 30 = 52$ $\Rightarrow 3.136 - mgsin 30 + 92$ $\Rightarrow n = \frac{3.19}{90.000} = \frac{12.5}{25} = 920$ $\Rightarrow n = \frac{12.5}{9} = \frac{12.5}{25} = 920$ $\Rightarrow 1 = 0 = 12.5$
a) $\begin{array}{l} y = 3k - 5j, \\ y = -5k + 11j, \\ y = 2k, \\ z = $	$\Rightarrow 0.449 - T = 0.42 \times 29$ $\Rightarrow 0.449 - T = 0.089$ $\Rightarrow 0.49 - T = 0.089$ $\Rightarrow 0.49 - T = 0.089$ $\Rightarrow 0.136 - m_{3}in_{30} = m \times 89$ $\Rightarrow 3.136 = m_{3}(gsin_{30} + 92)$ $\Rightarrow 3.136 = m_{3}(gsin_{30} + 92)$ $\Rightarrow m = \frac{3.19}{98} = \frac{1.32}{92} = 829$ d) No. friction en the pulley. Tension is equal throughout the string. e) $u = 0$ $v^{2} = u^{2} + 2 \times 8g \times 1$ $u = \frac{3}{2}g = \frac{2}{2}g$ $s = 1$ $\Rightarrow v = 1.98 \text{ mm}^{-1}$ $t = \sqrt{2}$ f) Tension is innerved after 1 m of inervasient. To calculate the new acceleration: $-pig_{11}n_{30} = pila$ $(m = \frac{1.98}{2})$ u = 1.98
a) $ \begin{array}{l} \begin{array}{l} \begin{array}{l} y = 3 \pm -5 \pm \\ y = -5 \pm +11 \pm \\ y = -5 \pm +11 \pm \\ y = -5 \pm +11 \pm \\ y = -5 \pm \\ z = 2 \end{array} \end{array} \\ \begin{array}{l} \begin{array}{l} \begin{array}{l} \begin{array}{l} \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{l} \begin{array}{l} \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{l} \begin{array}{l} \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{l} \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{l} \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{l} \begin{array}{l} \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{l} \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{l} \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{l} \end{array} \\ \end{array} \\ \begin{array}{l} \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{l} \end{array} \\ \end{array} \\ \begin{array}{l} \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{l} \end{array} \\ \end{array} \\ \begin{array}{l} \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{l} \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{l} \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{l} \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{l} \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{l} \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{l} \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{l} \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array} \\ \end{array} \\ \end{array}$	$\Rightarrow 0.44 - T = 0.4 \times 29$ $\Rightarrow 0.49 - T = 0.089$ $\Rightarrow 0.49 - T = 0.089$ $\Rightarrow 0.329 = 3.36 N$ $\Rightarrow 3.136 = m(30) = m \times 89$ $\Rightarrow 3.136 = m(9sin 30 + 9s)$ $\Rightarrow 3.136 = m(9sin 30 + 9s)$ $\Rightarrow m = \frac{3.19}{980833} = \frac{132}{32} 600$ $\Rightarrow 0.16 + 0.0000 + 0.0000 + 0.0$
a) $\psi = 3\pm -5\pm$ $\chi = -5\pm +11\pm$ $\Rightarrow \psi = \psi \pm \pm \pm$ $\psi = 2$ $\psi = 2$ $\psi = 2$ $\psi = 4$ $\psi = -5\pm +11\pm$ $\Rightarrow \psi = \frac{\chi - \psi}{\psi}$ $\psi = -5\pm +12\pm$ $\psi = -\frac{2\pm +4\pm}{4}$ $= -2\pm \pm \frac{2}{4}$ $= 2\pm \frac{2}{35}$ $= -2\pm \frac{2}{35}$ $= -$	$\Rightarrow 0.44 - T = 0.4 \times 29$ $\Rightarrow 0.49 - T = 0.089$ $\Rightarrow 0.49 - T = 0.089$ $\Rightarrow 0.49 - T = 0.089$ $\Rightarrow 0.329 = 3.136 N$ $\Rightarrow 3.136 - mg in 30 = 52$ $\Rightarrow 3.136 = m(30) + 92$ $\Rightarrow n = \frac{3.19}{ganses} = \frac{135}{32} = 920$ $\Rightarrow 0.460 n en the pulley.$ Tension is equal throughout the string. $\Rightarrow 0 + 2 \times 8g \times 1$ a = 8g = 8g $s = 1 \Rightarrow v = 1.98 ma^{-1}$ t = 1 $\Rightarrow v = 0 + 2 \times 8g \times 1$ a = 8g = 8g $s = 1 \Rightarrow v = 1.98 ma^{-1}$ t = 1 $\Rightarrow v = 0 + 2 \times 8g \times 1$ a = 8g = 8g $s = 1 \Rightarrow v = 1.98 ma^{-1}$ t = 1 $\Rightarrow v = 0 + 2 \times 8g \times 1$ a = 8g = 8g $s = 1 \Rightarrow v = 1.98 ma^{-1}$ t = 1 $\Rightarrow v = 0 + 2 \times 8g \times 1$ a = 29 a = 29 How for until particle A course to set? u = 1.98 v = 0 + 28 + 28 - 28 = 3
a) $\begin{array}{l} y = 3 \pm -5 \pm y \\ y = -5 \pm +11 \pm y \end{array} \qquad \qquad$	$\Rightarrow 0.44 - T = 0.4 \times 29$ $\Rightarrow 0.49 - T = 0.089$ $\Rightarrow 0.49 - T = 0.089$ $\Rightarrow 0.49 - T = 0.089$ $\Rightarrow 0.329 = 3.136 N$ $\Rightarrow 3.136 - mg in 30 = 52$ $\Rightarrow 3.136 = m(30) + 92$ $\Rightarrow n = \frac{3.19}{ganses} = \frac{135}{32} = 920$ $\Rightarrow 0.460 n en the pulley.$ Tension is equal throughout the string. $\Rightarrow 0 + 2 \times 8g \times 1$ a = 8g = 8g $s = 1 \Rightarrow v = 1.98 ma^{-1}$ t = 1 $\Rightarrow v = 0 + 2 \times 8g \times 1$ a = 8g = 8g $s = 1 \Rightarrow v = 1.98 ma^{-1}$ t = 1 $\Rightarrow v = 0 + 2 \times 8g \times 1$ a = 8g = 8g $s = 1 \Rightarrow v = 1.98 ma^{-1}$ t = 1 $\Rightarrow v = 0 + 2 \times 8g \times 1$ a = 8g = 8g $s = 1 \Rightarrow v = 1.98 ma^{-1}$ t = 1 $\Rightarrow v = 0 + 2 \times 8g \times 1$ a = 29 a = 29 How for until particle A course to set? u = 1.98 v = 0 + 28 + 28 - 28 = 3
a) $\begin{array}{l} y = 3 \pm -5 \pm y \\ y = -5 \pm +11 \pm y \end{array} \qquad \qquad$	$\Rightarrow 0.49 - T = 0.4 \times 89$ $\Rightarrow 0.49 - T = 0.089$ $\Rightarrow 0.49 - T = 0.089$ $\Rightarrow 0.49 - T = 0.089$ $\Rightarrow 0.136 - mgin 30 = m \times 89$ $\Rightarrow 3.136 = m(gin 30 + 92)$ $\Rightarrow 3.136 = m(gin 30 + 92)$ $\Rightarrow m = \frac{3.19}{98.000} = -\frac{132}{32} \text{ GeD}$ d) No friction on the pulley. Tension is equal throughout the string. e) $u = 0$ $v^{2} = u^{2} + 2us$ $v = v$ $= 0^{2} + 2 - 8g \times 1$ a = 8g = 8g $s = 1 \Rightarrow v = 1.98 \text{ mm}^{-1}$ t = 1 f) Tension is knowed after 1m of neversient. Tension is knowed after 1m of neversient. Tension is never after 1m of neversient. Tension is proved after 1m of neversient. Tension is never after 1m of never af
a) $u = 3k - 5j$ $x = -5k + 11j$ $\Rightarrow k = \frac{x - k}{2}$ k = k k = k	$\begin{array}{l} \Rightarrow 0.49 - T = 0.4 \times 89 \\ \Rightarrow 0.49 - T = 0.089 \\ \Rightarrow 0.49 - T = 0.089 \\ \end{array}$ b) $T = 0.49 - 0.089 = 0.329 = 3.136 N$ c) (k): $T - main 30 = m \times 89 mg \\ 3.136 - mg sin 30 = \frac{5}{92} \\ \Rightarrow 3.136 = \frac{m(gsin 30 + \frac{9}{25})}{3} \\ \Rightarrow m = \frac{3.19}{9000032} = \frac{7.35}{32} \\ \end{array}$ d) No friction on the pulley. Tension is equal throughout the string. e) $u = 0$ $v^{2} = u^{2} + 2aA \\ v = v = 0^{2} + 2 \times 8g \times 1$ $a = \frac{8}{29} = \frac{7}{29} \\ s = 1 \Rightarrow v = \frac{1.98 ma^{-1}}{1.98 ma^{-1}} \\ t = 1$ f) Tension is removed after 1m of neovement. To calculate the new corelectuation: $-mgain 30 = maa \\ (m = \frac{193}{2}) \\ a = \frac{7}{29} \\ How fix until particle A cose to rest? \\ u = 1.98 \\ v = 0 \\ v^{2} = u^{2} + 2aA \\ a = \frac{7}{29} \\ 0 = 1.98^{2} + 2x - 4g 3 \\ s = s \\ \Rightarrow 9 \\ s = 1 \\ \Rightarrow s = \frac{1.98}{9} = \frac{7}{4} = 0.44 m.$ So after a further 0.4m A conves to Nost. This is at the
a) $u = 3k - 5j$ $x = -5k + 11j$ $\Rightarrow k = k + kk$ k = 2k k = k k = k $k = k$, what is $\frac{1}{2k} = \sqrt{180} = \frac{13 \cdot 4}{4}$ $k = -\frac{2k}{4} + \frac{4}{4} - \frac{4}{4}$ $k = -\frac{2k}{4} + \frac{2k}{4}$ $k = \frac{2k}{4} + \frac{2k}{4}$ k =	$\begin{array}{l} \Rightarrow 0.49 - T = 0.4 \times 89 \\ \Rightarrow 0.49 - T = 0.089 \\ \Rightarrow 0.49 - T = 0.089 \\ \end{array}$ b) $T = 0.49 - 0.089 = 0.329 = 3.136 N$ c) (k): $T - main 30 = m \times 89 mg \\ 3.136 - mg sin 30 = \frac{5}{92} \\ \Rightarrow 3.136 = \frac{m(gsin 30 + \frac{9}{25})}{3} \\ \Rightarrow m = \frac{3.19}{9000032} = \frac{7.35}{32} \\ \end{array}$ d) No friction on the pulley. Tension is equal throughout the string. e) $u = 0$ $v^{2} = u^{2} + 2aA \\ v = v = 0^{2} + 2 \times 8g \times 1$ $a = \frac{8}{29} = \frac{7}{29} \\ s = 1 \Rightarrow v = \frac{1.98 ma^{-1}}{1.98 ma^{-1}} \\ t = 1$ f) Tension is removed after 1m of neovement. To calculate the new corelectuation: $-mgain 30 = maa \\ (m = \frac{193}{2}) \\ a = \frac{7}{29} \\ How fix until particle A cose to rest? \\ u = 1.98 \\ v = 0 \\ v^{2} = u^{2} + 2aA \\ a = \frac{7}{29} \\ 0 = 1.98^{2} + 2x - 4g 3 \\ s = s \\ \Rightarrow 9 \\ s = 1 \\ \Rightarrow s = \frac{1.98}{9} = \frac{7}{4} = 0.44 m.$ So after a further 0.4m A conves to Nost. This is at the
a) $u = 3k - 5j$ $x = -5k + 11j$ $\Rightarrow k = \frac{x - k}{2}$ k = k k = k	$\Rightarrow 0.49 - T = 0.4 \times 89$ $\Rightarrow 0.49 - T = 0.089$ $\Rightarrow 0.136 - msin 30 = m \times 89$ $\Rightarrow 3.136 = m(gsin 30 + 95)$ $\Rightarrow n = \frac{3.19}{980 \times 32} = \frac{132}{32} 800$ $d) No. friction on the pulley. Tension is equal throughout the string. e) u = 0 \qquad v^{2} = u^{2} + 2x8 g \times 1a = 89 = 869s = 1 \qquad \Rightarrow v = 1.98 \text{ mm}^{-1}t =f) Tension is removed after 1 m of nervesient. To calculate the new acceleration: -prigin 30 = pria (m = 168) \qquad a = -29How far until particle A coarse to reat?u = 1.98v = 0 \qquad v^{2} = u^{2} + 2x - 283a = -29 \qquad 0 = 1.98^{2} + 2x - 283s = s \qquad \Rightarrow 9S = 1.98^{2}k = \qquad y = 0.94 \text{ m}.$