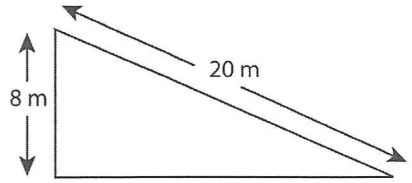
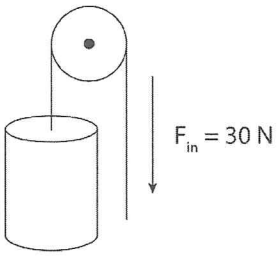
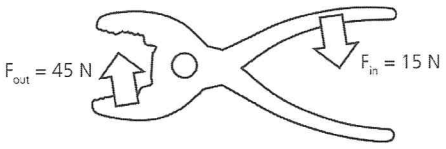
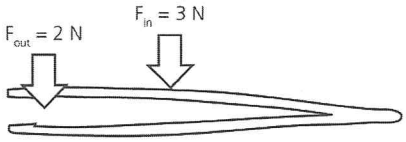
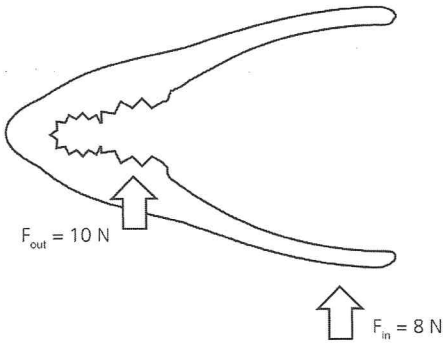
Line Master 8B-7 Simple Machines

Illustration	Type of Machine	Mechanical Advantage	Ideal Mechanical Advantage
	Inclined plane	_____	$\text{IMA} = \frac{I}{H} = \frac{20\text{ m}}{8\text{ m}} = 2.5$
	Pulley	$\text{MA} = \frac{F_{out}}{F_{in}} = \frac{30\text{ N}}{30\text{ N}} = 1$	The number of support ropes is 1, so the IMA = 1
	First-class lever	$\text{MA} = \frac{F_{out}}{F_{in}} = \frac{45\text{ N}}{15\text{ N}} = 3$	_____
	Third-class lever	$\text{MA} = \frac{F_{out}}{F_{in}} = \frac{2\text{ N}}{3\text{ N}} = 0.67$	_____
	Second-class lever	$\text{MA} = \frac{F_{out}}{F_{in}} = \frac{10\text{ N}}{8\text{ N}} = 1.25$	_____