Requirement				
exercise 1				scale is given for drawings
				Force 1 drawn to scale on 1st set of axes
				Force 2 drawn to scale on 2nd set of axes
	component table	Force 1	Arithmetic	seting up the Force equation correctly for Force 1
				spiting r-hat into cosθx-hat+sinθy-hat
				multiplying mass times acceleration
				distributing (FOIL-ing) the force into the component vectors
			units	using correct units for mass and accelaration
				calculation finishes with units that have the correct order of magnitude
				calculation leads to correct units for a force.
				Force 1 x-component entered in table
				Force 1 y-component entered in table
		Force 2	Arithmetic	seting up the Force equation correctly for Force 1
				spiting r-hat into cosθx-hat+sinθy-hat
				multiplying mass times acceleration
				distributing (FOIL-ing) the force into the component vectors
			units	using correct units for mass and accelaration
				calculation finishes with units that have the correct order of magnitude
				calculation leads to correct units for a force.
				Force 1 x-component entered in table
				Force 1 y-component entered in table
				x-components are summed correctly to yeild Resultant x-component
				y-components are summed correctly to yeild Resultant y-component
	F_R drawing			Force 2 has been drawn starting from the tip of Force 1 (or vice versa) on the lower set of axes and both are to scale.
				The Resultant force has been drawn from the origin of the lower axes to the tip of the sum of the component axes .
	ArcTangent			the angle of the reultant vector from the x-axis has been found using the arctan function
				the operand of arctan is set up as y-component over x-component
				units have been included and cancled correctly
				the quadrent of the Resultant force has been accounted for and the actual angle of the resultant vector has been found
	F_R calc			pythagorean theorum set up properly
				units have been calculated correctly
				Arithmetic has been performed correctly
	F_E calc			F=ma used properly
				units have been calculated correctly
				Arithmetic has been performed correctly
	% difs			the % difference has been found between the magnagues of the calculated and measured forces
				difference in angle between the calculated and meaured angles is calculated
				subtotal

exercise 2				scale is given for drawings
				Force 1 drawn to scale on 1st set of axes
				Force 2 drawn to scale on 2nd set of axes
	component table	Force 1	Arithmetic	seting up the Force equation correctly for Force 1
				spiting r-hat into cosθx-hat+sinθy-hat
				multiplying mass times acceleration
				distributing (FOIL-ing) the force into the component vectors
			units	using correct units for mass and accelaration
				calculation finishes with units that have the correct order of magnitude
				calculation leads to correct units for a force.
				Force 1 x-component entered in table
				Force 1 y-component entered in table
		Force 2	Arithmetic	seting up the Force equation correctly for Force 1
				spiting r-hat into cosθx-hat+sinθy-hat
				multiplying mass times acceleration
				distributing (FOIL-ing) the force into the component vectors
			units	using correct units for mass and accelaration
				calculation finishes with units that have the correct order of magnitude
				calculation leads to correct units for a force.
				Force 1 x-component entered in table
				Force 1 y-component entered in table
				x-components are summed correctly to yeild Resultant x-component
				y-components are summed correctly to yeild Resultant y-component
	F_R drawing			Force 2 has been drawn starting from the tip of Force 1 (or vice versa) on the lower set of axes and both are to scale.
				The Resultant force has been drawn from the origin of the lower axes to the tip of the sum of the component axes .
	ArcTangent			the angle of the reultant vector from the x-axis has been found using the arctan function
				the operand of arctan is set up as y-component over x-component
				units have been included and cancled correctly
				the quadrent of the Resultant force has been accounted for and the actual angle of the resultant vector has been found
	F_R calc			pythagorean theorum set up properly
				units have been calculated correctly
				Arithmetic has been performed correctly
	F_E calc			F=ma used properly
				units have been calculated correctly
				Arithmetic has been performed correctly
	% difs			the % difference has been found between the magnagues of the calculated and measured forces
				difference in angle between the calculated and meaured angles is calculated
				subtotal
				scale is given for drawings
				Force 1 drawn to scale on 1st set of axes

exercise 3				Force 2 drawn to scale on 2nd set of axes
	component table	Force 1	Arithmetic	seting up the Force equation correctly for Force 1
				spiting r-hat into cosθx-hat+sinθy-hat
				multiplying mass times acceleration
				distributing (FOIL-ing) the force into the component vectors
			units	using correct units for mass and accelaration
				calculation finishes with units that have the correct order of magnitude
				calculation leads to correct units for a force.
				Force 1 x-component entered in table
				Force 1 y-component entered in table
		Force 2	Arithmetic	seting up the Force equation correctly for Force 1
				spiting r-hat into cosθx-hat+sinθy-hat
				multiplying mass times acceleration
				distributing (FOIL-ing) the force into the component vectors
			units	using correct units for mass and accelaration
				calculation finishes with units that have the correct order of magnitude
				calculation leads to correct units for a force.
				Force 2 x-component entered in table
				Force 2 y-component entered in table
		Force 3	Arithmetic	seting up the Force equation correctly for Force 1
				spiting r-hat into cosθx-hat+sinθy-hat
				multiplying mass times acceleration
				distributing (FOIL-ing) the force into the component vectors
			units	using correct units for mass and accelaration
				calculation finishes with units that have the correct order of magnitude
				calculation leads to correct units for a force.
				Force 3 x-component entered in table
				Force 3y-component entered in table
				x-components are summed correctly to yeild Resultant x-component
				y-components are summed correctly to yeild Resultant y-component
	F_R drawing			Force 2 has been drawn starting from the tip of Force 1 (or vice versa) on the lower set of axes and both are to scale.
				The Resultant force has been drawn from the origin of the lower axes to the tip of the sum of the component axes .
	ArcTangent			the angle of the reultant vector from the x-axis has been found using the arctan function
				the operand of arctan is set up as y-component over x-component
				units have been included and cancled correctly
				the quadrent of the Resultant force has been accounted for and the actual angle of the resultant vector has been found
	F_R calc			pythagorean theorum set up properly
				units have been calculated correctly
				Arithmetic has been performed correctly
	F_E calc			F=ma used properly
				units have been calculated correctly
				Arithmetic has been performed correctly

	% difs	the % difference has been found between the magnagues of the calculated and measured forces
		difference in angle between the calculated and meaured angles is calculated
		subtotal
		total

Possible points
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