Después de la palabra "When"

A continuación de la palabra "*WHEN*" puede interpretarse de dos maneras:

when + Ving:

i. al + infinitivo (... al realizar una acción ...)

ii. Cuando + se + Verbo (... cuando se realiza una acción ...)

Ejemplos:

1. However a "common practice" that provides an expediency in presentation is to read *f(x)* as, "the image of *x* with respect to the function *f*" and then use it when **referring** to the function.
2. Numerical calculations obviously involve the manipulation (i.e., addition, multiplication, etc.) of numbers. Numbers can be integers (e.g., 4, 17, –23, etc.), fractions (e.g., ½, –⅔, etc.), or an infinite string of digits (e.g., π=3.1415926535...). When **dealing with** numerical values and numerical calculations, there are several concepts that must be considered.
3. If you follow these conventions when **calculating** currents, then those currents whose directions were assigned correctly will have positive values and those whose directions were assigned incorrectly will have negative values.
4. When **using** Equation 2 to compute a derivative, we must remember that the variable is and that is temporarily regarded as a constant during the calculation of the limit.
5. In each of the above cases, you should indicate specifically each one of the rules we have used to derive the desired equality. Again, we emphasize that you should be especially careful when **working** with negative numbers and repeated minus signs. This is one of the most frequent sources of error when we work with multiplication and addition.

EXCEPCIONES

En general podemos afirmar que la mayoría de las palabras que terminan en "ING" son gerundios. Sin embargo, existen palabras con dicha terminación que no responden a dicha inflexión verbal. Por ejemplo:

thing (y sus compuestos tales como *something, anything*, etc.)

La inflexión base de ciertos verbos: *ring, swing, cling*, etc.

Algunos sustantivos: *wing, sling, king*, etc.

Algunas preposiciones: *concerning, excepting, excluding, including, regarding, according to, during*, etc.

Ejemplos:

1. Let us observe one **thing** more in connection with the system of equations $RX = 0$. If the number r of non-zero rows in R is less than n, then the system $RX = 0$ has a non-trivial solution.
2. Convention: For convenience, operations called subtraction and division are defined by $a - b = a + (-b)$ and $a/b = ab^{-1}$, respectively. These enable us to operate **according to** the usual rules of algebra. In general any set, such as R, whose members satisfy the above is called a *field*.
3. Thus A is not invertible as a matrix over the **ring** of integers; however, we can also regard A as a matrix over the field of rational numbers.
4. It is not necessary to solve the linearized equations to a small tolerance **during** the early stages of the overall two-step procedure.
5. Although the method of cofactors is not recommended for **anything** larger than a 4×4 determinant, it is useful to understand the concepts involved.

Blaise Pascal (19 June 1623 – 19 August 1662) was a French mathema–tician, physicist, inventor, writer and Catholic theologian. He was a child prodigy who was educated by his father, a tax collector in Rouen. Pascal's earliest work was in the natural and applied sciences where he made important contributions to the study of fluids, and clarified the concepts of pressure and vacuum by generalising the work of Evangelista Torricelli. Pascal also wrote in defence of the scientific method.

Pascal was an important mathematician, helping create two major new areas of research: he wrote a significant treatise on the subject of projective geometry at the age of 16, and later corresponded with Pierre de Fermat on probability theory, strongly influencing the development of modern economics and social science. Following Galileo Galilei and Torricelli, in 1647, he rebutted Aristotle's followers who insisted that nature abhors a vacuum. Pascal's results caused many disputes before being accepted.

In 1646, he and his sister Jacqueline identified with the religious movement within Catholicism known by its detractors as Jansenism. His father died in 1651. Following a religious experience in late 1654, he began writing influential works on philosophy and theology. His two most famous works date from this period: the Lettres provinciales and the Pensées, the former set in the conflict between Jansenists and Jesuits. In that year, he also wrote an important treatise on the arithmetical triangle. Between 1658 and 1659 he wrote on the cycloid and its use in calculating the volume of solids.

Pascal had poor health, especially after the age of 18, and he died just two months after his 39th birthday.

UNIDAD 19 FORMA IMPERSONAL DEL VERBO "HABER"

Para denotar existencia en forma impersonal (no se observa un sujeto visible), en inglés empleamos la siguiente estructura:

THERE + BE

Dicha estructura puede ser elaborada de igual manera que los tiempos de verbos vistos anteriormente.

PRESENTE SIMPLE

Afirmativo	THERE + *is* / *are*
Negativo	THERE + *is* + NOT / *are*
Interrogativo	*Is* / *Are* + THERE ?

FUTURO SIMPLE

Afirmativo	THERE + *will* + *be*
Negativo	THERE + *will* + NOT be
Interrogativo	*Will* + THERE + be ?

PASADO SIMPLE

Afirmativo	THERE + *was* / *were*
Negativo	THERE + *was*+ NOT / *were*
Interrogativo	*Was* / *Were* + THERE ?

CONDICIONAL SIMPLE

Afirmativo	THERE + *would* + be
Negativo	THERE + *would* + NOT + be
Interrogativo	*Would* + THERE + be ?

PRESENTE PERFECTO

Afirmativo	THERE + *have* / *has* + been
Negativo	THERE + *have* / *has* + *NOT* + been
Interrogativo	*Have* / *Has* + THERE + been ?

PASADO PERFECTO

Afirmativo	THERE + *had* + been
Negativo	THERE + had + NOT + been
Interrogativo	*Had* + THERE + been ?

VERBOS MODALES (M) (BE)

Afirmativo	THERE + (*M*) + be	There can be There must be
Negativo	THERE + (*M*) + NOT + be	There should not be There could not be
Interrogativo	(M) + THERE + be?	Can there be? Must there be?

- Component v_y changes from its initial value $v_{0y} = v_0 \sin \theta_0$ because **there is** a vertical acceleration.

- The integral must be taken over the entire charge distribution. Note that because the electric potential is a scalar, **there are** *no vector components* to consider in Eq. 24-32.

- **There were** then two ways to distinguish the predicted rare antiprotons from the abundant negative pions.

- In general, for every path connecting *I* and *F* (except the straight-line path), **there will be** a neighboring path such that matter waves following the two paths cancel each other by interference.

- This result is valid under the assumption that the spin rate *v* is rapid. Note that *n* decreases as *v* is increased. Note also that **there would be** no precession if the gravitational force *Mg* did not act on the gyroscope.

- **There has been** only one source of particles with these energies, and that was the universe itself within the first millisecond of its existence.

- Thus, from Eq. 40-17, **there should be** a range of forces on the atoms, and therefore a range of deflections of the atoms, from a greatest downward deflection to a greatest upward deflection.

- **There may be** multiple forces acting on a body, but if their net force is zero, the body cannot accelerate.

UNIDAD 20 VERBOS FRASE

El verbo frase es una estructura compuesta por un verbo principal y un adverbio o una preposición, o ambos. En la mayoría de los casos, su significado no resulta obvio a partir del significado de las palabras individuales. Es decir, la combinación en su conjunto adopta un significado totalmente distinto a aquél del verbo principal. A pesar de que su uso está más generalizado en la parte oral y los textos informales, es posible encontrarlos con cierta frecuencia en los textos técnicos formales.

INGLÉS	ESPAÑOL
BLOW UP	EXPLOTAR
BREAK DOWN	DESCOMPONERSE, ROMPERSE
BREAK OFF	DISCONTINUAR
BRING ABOUT	PROVOCAR, OCASIONAR
CALL FOR	REQUERIR
CALL OFF	CANCELAR
CARRY ON	CONTINUAR
CARRY OUT	REALIZAR, LLEVAR A CABO
CARRY THROUGH	COMPLETAR
COME FROM	PROCEDER
COME IN	INGRESAR
COME TO	ALCANZAR
COPE WITH	PODER CON, HACER FRENTE A
DEAL WITH	ESTUDIAR, OCUPARSE DE
DO AWAY WITH	ELIMINAR
DO WITHOUT	PRESCINDIR DE
FALL APART	ROMPERSE EN PEDAZOS
FALL OFF	DISMINUIR
GET TO	ALCANZAR
GO OFF	EXPLOTAR
GO ON	CONTINUAR, TRANSCURRIR
GO OVER	INSPECCIONAR LOS DETALLES DE ALGO

INGLÉS	ESPAÑOL
GO THROUGH	EXAMINAR
GO UP	SUBIR, AUMENTAR
KEEP BACK	RETENER
LAY OUT	ARREGLAR / DISPONER / CONFIGURAR
LOOK FOR	BUSCAR
LOOK INTO	INVESTIGAR
LOOK THROUGH	EXAMINAR
LOOK UP	CONSULTAR EN UN LIBRO
MAKE OUT	RECONOCER, DISTINGUIR
MAKE UP	CONSTITUIR, FORMAR
MAKE UP FOR	COMPENSAR
POINT OUT	EXPLICAR
PUT FORWARD	SUGERIR, PROPONER
PUT OFF	POSPONER
PUT OUT	EXTINGUIR, APAGAR
PUT UP WITH	TOLERAR, ACEPTAR
RULE OUT	DESCARTAR, EXCLUIR
RUN OUT OF	AGOTARSE, QUEDARSE SIN
SET ASIDE	RESERVAR PARA USO ULTERIOR
SET BACK	PERJUDICAR
STAND FOR	REPRESENTAR/OFRECERSE PARA
TAKE OFF	DESPEGAR
TAKE OVER	TOMAR EL CONTROL DE
TRY OUT	PROBAR, INTENTAR
TURN OFF	APAGAR
TURN ON	ENCENDER
WEAR OFF	DESAPARECER PAULATINAMENTE
WORK OUT	SALIR BIEN, RESOLVER/AGOTAR

EJEMPLOS

1. We do not have a function $F(x)$ to **carry out** the integration, but we do have a graph of $F(x)$ where we can integrate by finding the area between the plotted line and the x axis.

2. Solutions of Schrödinger's equation for multielectron atoms can be **carried out** numerically (in principle at least) using a computer.

3. We have developed enough techniques to be able to sketch curves and graphs of functions much more efficiently than before. We shall investigate systematically the behavior of a curve, and the mean value theorem will play a fundamental role.
   We shall especially **look for** the following aspects of the curve:
   1. Intersections with the coordinate axes.
   2. Critical points.
   3. Regions of increase.
   4. Regions of decrease.
   5. Maxima and minima (including the local ones).
   6. Behavior as x becomes very large positive and very large negative.
   7. Values of x near which y becomes very large positive or very large negative.

4. We finally come to the point where we develop a method which allows us to compute the values of the elementary functions like sine, exp, and log. The method is to approximate these functions by polynomials, with an error term which is easily estimated. This error term will be given by an integral, and our first task is to estimate integrals. We then **go through** the elementary functions systematically, and derive the approximating polynomials.

5. There is little of much interest as regards the physics of stable nuclei. However, nuclei that are not stable tend to **break down** into two or more simpler objects.

6. For instance, there is sound absorption as sound passes through matter (although sound cannot pass without matter): the sound energy **falls off** as viscous forces oppose the motion of the particles.

7. Elementary (or subatomic) particles are those that **make up** atoms or are similar to atoms in mass.

8. The rate of growth of scale of integration **goes on** without slowing (though quantum limits may be a final barrier), towards giga scale integration (gsi); this involves thousands of millions of elements on a chip.

9. Kinetic theories depend on statistics: they **deal with** the bulk behaviour of large numbers of unpredictable particles.

10. A homogeneous item is **made up of** similar elements or components, or uniform in type and nature.

REVISIÓN 2

[1] Sir Isaac Newton was an English physicist and mathematician (described in his own day as a "natural philosopher") **who** is widely recognised as one of the most influential scientists of all time and as a key figure in the scientific revolution. His book *Philosophiæ Naturalis Principia Mathematica* ("Mathematical Principles of Natural Philo–sophy"), first published in 1687, laid the foundations for classical mechanics. Newton also made seminal contributions to optics and shares credit with Gottfried Leibniz for the development of calculus.

[2] Newton's Principia formulated the laws of motion and universal gravitation **which** dominated scientists' view of the physical universe for the next three centuries. By deriving Kepler's laws of planetary motion from his mathematical description of gravity, and then using the same principles to account for the trajectories of comets, the tides, the precession of the equinoxes, and other phenomena, Newton removed the last doubts about the validity of the heliocentric model of the cosmos. **This work** also demonstrated that the motion of objects on Earth and of celestial bodies could be described by the same principles. His prediction that the Earth should be shaped as an oblate spheroid was later vindicated by the measurements of Maupertuis, La Condamine, and others, **which** helped convince most Continental European scientists of the superiority of Newtonian mechanics over the earlier system of Descartes.

[3] Newton also built the first practical reflecting telescope and developed a theory of colour based on the observation that a prism decomposes white light into the many colours of the visible spectrum. He formulated an empirical law of cooling, studied the speed of sound, and introduced the notion of a Newtonian fluid. In addition to his work on calculus, as a mathematician Newton contributed to the study of power series, generalised the binomial theorem to non-integer exponents, developed Newton's method for approximating the roots of a function, and classified most of the cubic plane curves.

[4] Newton was a fellow of Trinity College and the second Lucasian Professor of Mathematics at the University of Cambridge. He was a devout but unorthodox Christian and, unusually for a member of the Cambridge faculty of the day, he refused to take holy orders in the Church of England, perhaps because he privately rejected the doctrine of the Trinity. Beyond his work on the mathematical sciences, Newton dedicated much of his time to the study of biblical chronology and alchemy, but most of his work in **those areas** remained unpublished until long after his death. In his later life, Newton became president of the Royal Society. He also served the British government as Warden and Master of the Royal Mint.

https://therealnerdherd.wordpress.com/2018/01/04/isaac-newton-was-born-january-4-1643/

(1)PROFESOR LUCASIANO: El **profesor Lucasiano es** el titular de la Cátedra Lucasiana de Matemáticas (*Lucasian Chair of Mathematics*) de la Universidad de Cambridge. El cargo fue fundado en 1663 por Henry Lucas, miembro del parlamento inglés por la Universidad entre 1639 y 1640, y establecido oficialmente por Carlos II en 1664. Lucas, en su testamento, legó su biblioteca de 4000 volúmenes a la Universidad, y mandó la compra de terrenos que diesen un rendimiento anual de 100 libras para poder fundar una Cátedra. Ordenaba también que el profesor que ocupase esta cátedra tenía que dar por lo menos una clase de matemáticas a la semana, y habría de estar disponible dos horas semanales para resolver las dudas de los alumnos. El primer profesor Lucasiano fue Isaac Barrow, sucedido por Isaac Newton. El cargo fue ocupado entre 1980 y 2009 por Stephen Hawking. El actual ocupante de la cátedra es Michael Green. (Fuente: Wikipedia)

1. **TÍTULO.** Seleccione el mejor título para el texto.

___ A. An English Physicist
___ B. The Foundations of Classical Mechanics
___ C. Isaac Newton
___ D. The Laws Of Motion

2. **IDEA PRINCIPAL.** Indique cuál oración expresa más acabadamente la idea principal del texto.

___ 1. Newton built a reflecting telescope and developed colour theory.
___ 2. Facts about Newton's life and work are pondered.
___ 3. Newton was Warden and Master of the Royal Mint.
___ 4. The motion of objects on Earth and of celestial bodies can be explained by the same principles.

3. **VOCABULARIO (a).** Consulte el texto y encuentre sinónimos de las siguientes palabras:

1. acknowledged (r. 2) _____
2. cleared (r. 12) _____
3. made (r.19) _____
4. idea (r.22) _____
5. was (r.33) _____

4. **VOCABULARIO (b).** Consulte el texto y encuentre antónimos de las siguientes palabras:

1. irrelevant (r.6) _____
2. previous (r.9) _____
3. was not to (r.14) _____
4. neglected (r.23) _____
5. accepted (r.29) _____

5. **REFERENCIA EN EL CONTEXTO (A).** Lea nuevamente el texto y consigne a qué hacen referencia las palabras dadas.

1. who (r.2) _____
2. which (r.8) _____
3. this work (r.13) _____
4. which (r.17) _____
5. those areas (r.33) _____

6. **LECTOCOMPRENSIÓN. (A)** Consulte el texto e indique si las siguientes oraciones son verdaderas o falsas (V/F). Corrija las oraciones falsas en el espacio provisto a tal efecto. Señale los renglones de referencia.

V/F	ORACIÓN	Renglón
	1. Newton dedicó gran parte de su tiempo al estudio de la cronología bíblica y a la alquimia.	
	2. Newton realizó contribuciones importantes en muchos campos, menos la óptica.	
	3. Newton no pudo demostrar nada mediante la derivación de las leyes de Kepler sobre el movimiento planetario.	
	4. Algunos trabajos de Newton recién fueron publicados mucho tiempo después de su muerte.	
	5. La mecánica Newtoniana resultó ser superior al antiguo sistema de Descartes.	

ESPACIO DE CORRECCIÓN

7. **LECTOCOMPRENSIÓN. (B)** Consulte el texto y responda las siguientes preguntas en castellano. Indique las referencias de renglón.

1. ¿Cuáles dudas disipó Newton? Renglón ▶

2. ¿Qué inclinación religiosa tenía Newton? Renglón ▶

3. ¿Qué proponía Newton en sus principios? Renglón ▶ ☐

4. ¿Qué otros aportes brindó además del cálculo? Renglón ▶ ☐

5. ¿Qué función cumplió en el Gobierno Británico? Renglón ▶ ☐

8. **FUNCIONES DEL LENGUAJE**. Identifique y transcriba el nexo según la referencia de renglón dada. Indique la relación lógica, el equivalente en español y las ideas relacionadas.

	Nexo lógico	Rel. Lógica	Equivalente
1. Renglón 25			

Ideas relacionadas

Idea 1:

Idea 2:

2. Renglón 32	Nexo lógico	Rel. Lógica	Equivalente

Ideas relacionadas

Idea 1: _____

_____

_____

Idea 2: _____

_____

_____

9. FUNCIONES COMUNICATIVAS.

Indique la función comunicativa existente en los renglones 1/9.

☐ INSTRUCCIÓN ☐ COMPARACIÓN ☐ NARRACIÓN

(Tache lo que no corresponda)

¿Qué se instruye? compara? narra? _____

_____

10. FORMACIÓN DE LAS PALABRAS

Completar los espacios con la forma apropiada de las palabras dadas.

describe(s), described, describing, description, descriptive

1. Another high-level distinction between model types is the goal of model design, which distinguishes between models for _____ , explanation, and decision. _____ models enable a black-box analysis of a system by providing a _____ of its overall behavior (data analysis).
2. Just as velocity _____ the rate of change of position with time, *acceleration* _____ the rate of change of velocity with time. Like velocity, acceleration is a vector quantity.

3. Physics is not simply a collection of facts and principles; it is also the *process* by which we arrive at general principles that _____ how the physical universe behaves.
4. Some physical quantities, such as time, temperature, mass, and density, can be _____ completely by a single number with a unit. But many other important quantities in physics have a *direction* associated with them and cannot be _____ by a single number.
5. The speed of the airplane combined with its direction of motion together constitute a quantity called *velocity*. Another example is *force,* which in physics means a push or pull exerted on a body. Giving a complete _____ of a force means _____ both how hard the force pushes or pulls on the body and the direction of the push or pull.

11. CLOZE. Complete el texto con las palabras dadas.

ACCELERATION	DEDUCED	EXTREMELY	FORCE	LAW
MOTION	PERFORMED	PRINCIPLES	PROVED	RELATIONSHIP

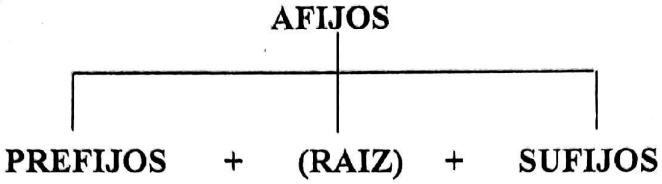
In this chapter we will use two new concepts, _____ and *mass,* to analyze the principles of dynamics. These _____ were clearly stated for the first time by Sir Isaac Newton (1642–1727); today we call them Newton's laws of motion. The first _____ states that when the net force on a body is zero, its motion does not change. The second law relates force to _____ when the net force is *not* zero. The third law is a _____ between the forces that two interacting bodies exert on each other.

Newton did not *derive* the three laws of motion, but rather _____ them from a multitude of experiments _____ by other scientists, especially Galileo Galilei. These laws are truly fundamental, for they cannot be deduced or _____ from other principles. Newton's laws are the foundation of classical mechanics (also called Newtonian mechanics); using them, we can understand most familiar kinds of _____. Newton's laws need modification only for situations involving _____ high speeds (near the speed of light) or very small sizes (such as within the atom).

UNIVERSITY PHYSICS WITH MODERN PHYSICS - Hugh D. Young, Roger A. Freedman.

UNIDAD 21 SUFIJOS

Al realizar el acto de lectura, se encontrará palabras desconocidas. A menudo se puede deducir el significado de dichas palabras si se comprende la forma según la cual se forman habitualmente las palabras en el idioma inglés.



En inglés, una palabra puede dividirse en tres partes: un prefijo, una raíz y un sufijo. **Pre-** significa "antes"; en consecuencia, un *prefijo* es lo que se agrega antes de la raíz. A modo de ejemplo, consideremos el prefijo **de-** (cuyo significado es "reducir" o "invertir") en una palabra tal como **de**magnetize (es decir, privar de magnetismo). Un *sufijo* es lo que se agrega al final de la raíz. Como ejemplo, tomemos el sufijo **-er** (cuyo significado es "la persona que") en la palabra programm**er** (la persona que programa). En forma genérica, a los prefijos y sufijos se los denomina *afijos*.

Los *prefijos* generalmente modifican el significado de una palabra; por ejemplo, **un-** le otorga el sentido opuesto. **Un**magnetizable significa "que no puede ser magnetizado". Los sufijos, en cambio, modifican la categoría gramatical de una palabra. Por ejemplo, el agregado de **-ly** a un adjetivo (quick) lo convierte en un adverbio de modo (quick**ly**). Consideremos ahora algunos sufijos y sus significados habituales.

ALGUNOS SUFIJOS QUE IDENTIFICAN A LAS CATEGORÍAS GRAMATICALES			
SUSTANTIVOS	**VERBOS**	**ADJETIVOS**	**ADVERBIOS**
-ance	-ize	-able	-ly
-ence	-ate	-ible	-ward(s)
-or	-fy	-less	-wise
-er	-en	-ic	
-ist	-lfy	-ical	

20.1. ESTUDIAR LAS TABLAS QUE SE CONSIGNAN A CONTINUACIÓN. LUEGO, CONSULTAR EL DICCIONARIO Y PROPORCIONAR EJEMPLOS ADICIONALES.

SUFIJOS QUE FORMAN VERBOS			
SUFIJO	**SIGNIFICADO**	**RAIZ**	**SUSTANTIVO**
-IZE	Realizar	computer	computerize
		total	totalize
		system	systematize
-ATE	Realizar	active	activate
		potent	potentiate
		oxygen	oxygenate
-FY(-IFY)	Realizar	acid	acidify
		code	codify
		note	notify
-EN	Realizar	short	shorten
		thick	thicken
		straight	straighten

SUFIJOS QUE FORMAN SUSTANTIVOS			
SUFIJO	**SIGNIFICADO**	**RAIZ**	**SUSTANTIVO**
-AL	condición, calidad	approve	approval
		propose	proposal
		refuse	refusal
-ANCE/-ENCE	acción, estado, condición or calidad	attend	attendance
		accept	acceptance
		exist	existence
-ATION/-TION	acción o estado resultante	educate	education
		inform	information
		eliminate	elimination
-SION	acción o estado resultante	confuse	confusion
		divide	division
		impress	impression
-URE	acción o estado resultante	depart	departure
		erase	erasure
		fail	failure

SUFIJOS QUE FORMAN SUSTANTIVOS (Continuación)			
SUFIJO	**SIGNIFICADO**	**RAIZ**	**SUSTANTIVO**
-MENT	estado, acción, condición	agree	agreement
		punish	punishment
		govern	government
-AGE	acción, estado, process	break	breakage
		pass	passage
		bag	baggage
-ING	acción, estado, process	land	landing
		write	writing
		feed	feeding
-NESS	estado, calidad, condición	useful	usefulness
		truthful	truthfulness
		quiet	quietness
-ITY	estado or condición	active	activity
		curious	curiosity
		mobile	mobility
-ISM	estado, práctica	ideal	idealism
		human	humanism
		conservative	conservatism
-TH	condición	wide	width
		long	length
		grow	growth
-Y	condición	private	privacy
		difficult	difficulty
		modest	modesty
-TY	condición	safe	safety
		certain	certainty
		subtle	subtlety
-ANT, ENT	persona, instrumento, agente	attend	attendant
		assist	assistant
		inform	informant
-EE	persona, instrumento, receptor de la acción	attend	attendee
		pay	payee
		trust	trustee

SUFIJOS QUE FORMAN SUSTANTIVOS (Continuación)			
SUFIJO	**SIGNIFICADO**	**RAIZ**	**SUSTANTIVO**
-AR	persona que realiza la acción	lie	liar
		registrate	registrar
-ER	persona que realiza la acción	build	builder
		buy	buyer
		call	caller
-OR	persona que realiza la acción	act	actor
		direct	director
		instruct	instructor
-ARIAN	Adherente a una doctrina particular	vegetable	vegetarian
		discipline	disciplinarian
		human	humanitarian
-EER	persona involucrada en.	engine	engineer
		auction	auctioneer
-IST	persona que practica una actividad	bicycle	bicyclist
		column	columnist
		physics	physicist
-DOM	estado, condición, función	star	stardom
		bore	boredom
		king	kingdom
-SHIP	estado, condición, destreza, oficio, asociado con	censor	censorship
		partner	partnership
		relation	relationship
-HOOD	estado, colectivo	brother	brotherhood
		neighbor	neighbourhood
		child	childhood
-ERY	ubicación, colectivo, comportamiento, condición	slave	slavery
		machine	machinery

SUFIJOS QUE FORMAN ADJETIVOS			
SUFIJO	**SIGNIFICADO**	**RAIZ**	**ADJETIVO**
-AL	Relacionado con	accident	accidental
		region	regional
		person	personal
		region	regional
		universe	universal
-ARY	Relacionado con calidad o lugar	custom	customary
		compliment	complimentary
		moment	momentary
		honor	honorary
		caution	cautionary
-FUL	Colmado de	beauty	beautiful
		skill	skilful
		wonder	wonderful
		success	successful
		delight	delightful
-IC	Que tiene la naturaleza de, provocado por	athlete	athletic
		photograph	photographic
		base	basic
		science	scientific
		history	historic
-ICAL	Que tiene la naturaleza de	practice	practical
		logic	logical
		statistic	statistical
		history	historical
		alphabet	alphabetical
-ISH	origen, naturaleza	child	childish
		self	selfish
-LESS	sin	power	powerless
		use	useless
		worth	worthless

SUFIJOS QUE FORMAN ADJETIVOS (Continuación)			
SUFIJO	**SIGNIFICADO**	**RAIZ**	**ADJETIVO**
-LY	Similar a	friend	friendly
		day	daily
		cost	costly
		order	orderly
		month	monthly
-OUS	calidad, naturaleza	poison	poisonous
		danger	dangerous
		mystery	mysterious
		nerve	nervous
		victory	victorious
-Y	Similar a	rain	rainy
		mess	messy
		dirt	dirty
-ABLE	capaz, puede hacer	agree	agreeable
		expand	expandable
		remark	remarkable
-IBLE	capaz, puede hacer	access	accessible
		flex	flexible
		permit	permisible
-ANT	Agente ejecutor	please	pleasant
		resist	resistant
		rely	reliant
		comply	compliant
-ENT	Agente ejecutor	excel	excellent
		urge	urgent
		depend	dependent
		differ	different
		equal	equivalent
-IVE	Provoca el efecto	posses	possessive
		create	creative
		prevent	preventive
		select	selective
		destruct	destructive

SUFIJOS QUE FORMAN ADJETIVOS (Continuación)			
SUFIJO	**SIGNIFICADO**	**RAIZ**	**ADJETIVO**
-ING	Provoca el efecto	amuse	amusing
		relax	relaxing
		excite	exciting
		surprise	surprising
		confuse	confusing
-ED	recibe el efecto	amuse	amused
		relax	relaxed
		excite	excited
		surprise	surprised
		confuse	confused
-EN	recibe el efecto	freeze	frozen
		lighten	lightened
		shorten	shortened
		darken	darkened
		widen	widened

SUFIJOS QUE FORMAN ADVERBIOS			
SUFIJO	**SIGNIFICADO**	**RAIZ**	**ADVERBIO**
-LY	en forma	perfect	perfectly
		quick	quickly
		slow	slowly
		quiet	quietly
		partial	partially
-WARD(S)	Forma y sentido del movimiento	in	inward
		north	northward
		out	outward
		up	upward
		back	backward
-WISE	en el modo de....	clock	clockwise
		piece	piecewise
		side	sidewise
		cross	crosswise
		length	lengthwise

SUFIJO	EJEMPLOS ADICIONALES		
–ABLE			
–AGE			
–AL			
–ANCE/–ENCE			
–ANT			
–ANT/–ENT			
–AR			
–ARIAN			
–ARY			
–ATE			
–ATION/–TION			
–DOM			
–ED			
–EE			
–EER			
–EN			
–ENT			
–ER			
–ERY			
–FUL			
–FY			
–HOOD			
–IBLE			

SUFIJO	EJEMPLOS ADICIONALES (Continuación)		
–IC			
–ICAL			
–ING			
–ISH			
–ISM			
–IST			
–ITY			
–IVE			
–IZE			
–LESS			
–LY			
–MENT			
–NESS			
–OR			
–OUS			
–SHIP			
–SION			
–TH			
–TY			
–URE			
–WARD(S)			
–WISE			
–Y			

21.1 DERIVAR SUSTANTIVOS DE LOS SIGUIENTES VERBOS MEDIANTE EL AGREGADO DEL SUFIJO CORRESPONDIENTE.

accept	: _____	enlarge	: _____
accuse	: _____	enter	: _____
adjust	: _____	expose	: _____
advertise	: _____	guide	: _____
appoint	: _____	inquire	: _____
attach	: _____	maintain	: _____
attend	: _____	manage	: _____
codify	: _____	perceive	: _____
compose	: _____	prefer	: _____
concur	: _____	produce	: _____
configure	: _____	quote	: _____
consume	: _____	recommend	: _____
contribute	: _____	recover	: _____
converge	: _____	renew	: _____
deliver	: _____	reside	: _____
deny	: _____	settle	: _____
depart	: _____	ship	: _____
discover	: _____	sign	: _____
dismiss	: _____	subsist	: _____
dispose	: _____	tolerate	: _____
emerge	: _____	treat	: _____
enclose	: _____	try	: _____
engage	: _____	verify	: _____

21.2 COMPLETAR LA SIGUIENTE TABLA CON LAS PALABRAS CORRESPONDIENTES A CADA CATEGORÍA. PUEDE HABER MÁS DE UNA POSIBILIDAD EN ALGUNAS CATEGORÍAS.

VERBO	SUSTANTIVO	ADJETIVO	ADVERBIO
complete			
	repetition		
		direct	
			interactively
correct			
	option		
		selective	
use			
	analysis		

21.3 COMPLETAR LOS ESPACIOS EN BLANCO CON LA FORMA ADECUADA DE LAS PALABRAS DADAS.

i. operate, operating, operation, operational, operationally, operator(s)

a. Numerous libraries and software packages are available for solving systems of linear algebraic equations. Many work stations and mainframe computers have such libraries attached to their _____ systems.

b. Some physical quantities are so fundamental that we can define them only by describing how to measure them. Such a definition is called an _____ definition.

c. The rational numbers are a field, that is, they satisfy all the axioms above. In ancient times, rationals were sometimes considered only _____ on actual numbers like 1; 2; 3; : : :.

d. The graph of $x = g[y]$ _____ gives the function g by choosing a y value on the y axis, moving horizontally to the graph, and then moving vertically to the x output on the x axis.

e. Thus the Substitution Rule says: It is permissible to _____ with dx and du after integral signs as if they were differentials.

f. The techniques of integration, up to a point, depend on our knowing the derivatives of certain functions, because one of the properties of integration is that it is the inverse _____ to differentiation.

ii. optimize, optimized, optimizing, optimal, optimization

a. Some of the most important applications of differential calculus are _____ problems, in which we are required to find the _____ (best) way of doing something.

b. The databases can also be used with algorithms that can assist the designer in _____ the design for some desired characteristic, such as strength, light weight, or lower cost.

c. A basic problem in computer design is how to _____ the fetching of instructions or data so that it will be ready when the processor (CPU) needs it.

d. Memory used on video cards is also _____ for video operations by using types of memory such as Video RAM (VRAM) that do not need to be refreshed as frequently.

iii. install, installed, installing, installation, installer

a. In one common type of radar _____, a rotating antenna sweeps a radio beam around the sky. But in a phased-array radar system, the antennas remain stationary and the beam is swept electronically.

b. The system administrator is responsible for _____ new or upgraded software on users' workstations

c. Modern operating systems attempt to make it harder for unauthorized programs to access critical system files by limiting default access permissions or prompting the user to approve various activities. They also include an updating feature that can automatically download and _____ security patches.

d. Traditionally, software applications such as office suites are sold as packages that are _____ and reside on the user's computer.

e. If you are having problems with slow speed or unreliable connections, you can download an offline _____ file to _____ Office.

Euclid (300 BC), sometimes given the name Euclid of Alexandria to distinguish him from Euclides of Megara, was a Greek mathematician, often referred to as the "founder of geometry" or the "father of geometry". He was active in Alexandria during the reign of Ptolemy I (323–283 BC). His Elements is one of the most influential works in the history of mathematics, serving as the main textbook for teaching mathematics (especially geometry) from the time of its publication until the late 19th or early 20th century. In the Elements, Euclid deduced the principles of what is now called Euclidean geometry from a small set of axioms. Euclid also wrote works on perspective, conic sections, spherical geometry, number theory, and rigor.