

agaii spustous

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TORONTO, APRIL 15, 1897.

25 CENTS A YEAR.

The President's Cabinet. building.

President McKinley has completed his cabinet The Serate has confirmed his appoint-

It will be noticed that the cabinet conments. It will be noticed that the cabinet con-sists of eight members in addition to the president. Each of the eight is termed a secretary. The list is as follows : For secretary of State, Hon. John Sherman, of Ohio, who resigned his United States senatorship to enter the cabinet ; secretary of the treasury, Lyman J. Gage, who gave up, for his present duties, the presidency of the First National Bank of Chicago, Ill. ; secretary of war, Gen. Russell A. Alger, exgovernor of Michigan; attorney-general, Judge Joseph J. McKenna, of California; postmaster-general, McKenna, of California; postmaster-general, James A. Gary of Maryland; secretary of the navy, ex-Governor, John D. Long, of Massachusetts ; secretary of the interior, Cornelius N. Bliss, of New York ; secretary of agriculture, ex-Congressman James F. Wilson, of Iowa.

The new administration starts out with high tariff as the leading plank in its platform. Such legislation will doubtless have an influence on that of our own parliament now in session at Ottawa.

demanded that he himself should be selected as the chief executive officer of the combined republics, that his country should be recognized as the foremost in rank, possessing the largest representation in the diet, and that Guatemala city should be the capital of the federation. As these terms were unacceptable to the other governments desirous of coming together, Guatemala had to be left outside. The recent announcement of Barrios that he will not again be a candidate for the presidency of Guatemala, is looked upon as an indication that that country will soon join the federation.

The Cretan Trouble.

Contrary to the instructions of the six great powers of Europe, the Greeks despatched troops

to Crete. Under the escort of Prince George's little fleet Col. Vassos landed with his soldiers on February 15th. The heroic Cretan bands, aided by the troops, soon had the island under partial control. The Moslems were forced to take refuge in a few of the fortified coast towns. But the Powers must maintain " the integrity of the Ottoman Empire," and so they demanded that Greece with-

# As noted The Greater Republic.

in our columns in an earlier

number, three of the five States of Central America have united in a federation known by the name of the Greater Republic of Central America. The three federail g States are Salvador, Nicaragua, and Honduras. When Guatemala and Costa Rica join the union the name will be changed to the Republic of Central America, that is, the word "Greater" will be drop ped. There is good ground for hoping that the two states last named will not long remain out in the cold. General Barrios, president of Guatemala, is looked upon as the one who prevented that country from joining in the federation scheme. As a condition of joining with the three others, he



draw her fleet from Cretan waters and her troops from Cretan soil. Greece replied that she would wihdraw her fleet but that she could not leave the Christians of the island to the Mohanmedan fanatics and soldiers. England suggested to the Powers that autonomy be granted to Crete under the suzerainty of the Porte. While this was acceptable to Crete, it was, for some reason or other, objected to by the other powers, notably Russia, Germany, and Austria. At present, owing to the refusal of Greece to withdraw from the the island, the Powers are conducting what they call a "pacific blockade," which means that no Greek vessel shall be allowed to enter Cretan ports, and only such vessels as the foreign admirals permit shall have that privilege.

## ANSWERS.

I. The monarchical government of Hawaii was overthrown and a republic established in January, 1893; Madgascar was made a French posseesion the 20th June, 1896. 2. The island of Reunion is in the Indian Ocean, near Mauritius. 3. Massowah is a city built on two islands on the western shore of the Red Sea. Taken by the Italians in February, 1885. Eritrea or Erythrea. 4. Emperor Francis Joseph of Austria-Hungary. 5. In January, 1896, soon after Jameson's raid and because of it. 6. Bechuanaland is a British territory north of Cape Colony and west of the Transvaal Republic. 7. The proposed routeof the British Pacific cable is from British Columbia to Australia and New Zealand, touching, if possible to arrange it, at Neckar Island, one of the Hawaii group. The proposed American line runs from California to Hawaii thence to Japan and China. 8. A court which is held at Ottawa for the trial of all cases agains the Crown, or the government of Canada. 9. A policy of liplomacy by the six powers has to give its consent to any proposition before it can be carried out.

## **QUESTIONS.**

1. What two states of Central America have thus far refused to join the new republic? 2. In the "Queen's speech" at the opening of the Canadian parliament recently, the following items are found : Intercolonial Extension, Cold Storage, Prohibition. What does parliament propose to do on these questions? 3. What is meant by the "diamond jubilee" so much spoken of at present? 4. The St. Lawrence canals are to be deepened to fourteen feet. What is their present depth? 5. Who is President Kruger? 6. Who is Col. Vassos? 7. Who is the military commander-in-chief in Canada? 8. What world renowned scientist and religious writer died recently, and what are his chief works? 9. What regular lineof connection by steamship has Canada on the west? 10. What Canadians have gained more or less fame as poets? 11. Who is the present King of Greece and when did he come to the throne? 12. What relation is King George to the Prince of Wales and the Czar of Russia?

# Geography.

## PRODUCTS OF THE FARM.

Agriculture is the chief industry in Canada ; 45 per cent. of our people are farmers, one-quarter of the freight on our railways and one-third of the freight on our canals are its products.

The following table will show the value of the chief products exported from our Canadian farms and also where these products find a market.

The money is given in even thousands.

1. Cheese \$14,250,000 : Great Britain \$14,221,-000, Newfoundland \$10,000, United States \$5,000.

2. Cattle \$7,121,000 : Great Britain \$6,798,000, Belgium \$163,000, United States \$110,000.

3. Wheat \$5,359,000 : Great Britain \$5.300.000, Germany \$30,000, Belgium \$18,000, United States. \$10,000.

4. Bacon \$3,546,000 : Great Britain \$3,544,000, Newfound/and \$2,000.

5. Apples \$2,071,000 : Great Britain \$1,660,000, United States \$200,000, Germany \$121,000, Newfoundland \$20,000.

6. Pease \$1,730,000 : Great Britain \$1,185,000, United States \$360,000, Holland \$41,000, Germany \$27,000, Belgium \$13,000, Newfoundland \$10,000.

7. Sheep \$1,625,000 : Great Britain \$1,253,000' United States \$347,000, Germany \$15,000.

8. Hay \$1,540,000 : United States \$980,000, Great Britain \$493,000, Newfoundland \$30,000, Belgium \$7,000.

9. Horses \$1,313,000 : Great Britain \$756,000, United States \$511,000, France \$15,000.

10. Wool \$1,050,000 : United States \$1,046,000, Great Britain \$2,000.

11. Hides \$961,000: United States \$946,000, Great Britain \$13,000.

12. Flour \$839,000: Great Britain \$449,000, Newfoundland \$375,000, \$375,000, United States \$10,000.

13. Grass seeds \$823,000 : Great Britain \$638,000, United States \$116,000, Germany \$62,000.

14. Eggs \$807,000 : Great Britain \$525,000, United States \$272,000.

15. Barley \$721,000 : United States \$707,000, Great Britain \$12,000.

16. Butter \$697,000: Great Britain \$541,000, Newfoundland \$109,000, Germany \$10,000, United States \$6,000.

17. Potatoes \$527,000 : United States, \$239,000, Spanish West Indies \$160,000, British West In dies \$66,000, Newfoundland \$16,000. du St sp an re Ir

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Canada stands twelfth among the wheat producing countries in the world ; Russia, United States, France, India, Hungary, Italy, Germany, Spain, Roumania, Argentine Republic, and Bulgaria, in the order mentioned, producing more per annum.

A great deal of attention has been paid during recent years to the production of beet-root sugar. In 1895 \$30.000 worth was produced.

In 1895 350,000 work was principle of the set of the se

Near Walkerville, in Essex, we have a tobacco farm of 110 acres, and throughout the Dominion we produce 4,277.936 lbs. of tobacco. This is chiefly raised in Quebec and Ontario.

Great attention has been paid to the cultivation of flax both for its seed and for its fibre. It is thought that the soil of Manitoba is especially suited to this industry, and that it will soon occupy the attention of the farmers of that province.

# Drawing.

BY A. C. CASSELMAN (NORMAL SCHOOL, TORONTO).

# FORM I. - CONCLUDED.

# (Answered in next issue.)

3. Draw an apple with the stem upward, showing one-quarter of it cut away. Draw also the quarter to the right of the apple.

4. (a) Draw a right cylinder receding horizontally to the right at an angle of about  $30^\circ$  to the picture plane, diameter about  $1\frac{1}{2}^{''}$ , length of axis about  $2\frac{1}{4}^{''}$ .

(b) Repeat the drawing in (a) and add such lines as are necessary to develop a common spool. 5. (a) Draw a frustum

5. (a) Draw a fusion of a square pyramid resting on the smaller square face, the edges of which make equal angles with the picture plane. Make an edge of the larger square face about  $2\frac{1}{2}$ " in length and an edge of the smaller square face about 2'. Height about  $1\frac{1}{4}$ ".

(b) Repeat the drawing in (a) and add such lines as are necessary to develop a small berrybox.

# ANSWERS TO LAST ISSUE.

 This question is answered by J.R. G. Murray, of Form III.B., Jarvis street Collegiate Institute.
The drawings of this question are grouped

2. The drawings of this question are grouped and much smaller than required on the examination.

(a) A sphere is a solid bounded by one curved surface, every part of which is equidistant from its centre.

( $\delta$ ) A hemisphere is a solid bounded by a circular plane face, and a curved face every part of

which is the same distance from the centre of the plane face.

(c) A right cylinder is a solid bounded by two circular plane faces and a curved face, every part of which is the same distance from the straight line jolning the centres of the plane faces.

(d) Half of a right cylinder is a solid bounded by two semi-circular plane faces, a rectangular plane face, and a curved face, every part of which



is the same distance from the straight line joining the middle points of the straight edges of the semicircular faces.

Or, a solid formed by dividing a right cylinder with a plane passing through its axis.

(e) A right cone is a solid bounded by a circular plane face and a curved face which tapers to a point in the axis.

(f) A cube is a solid bounded by six equal square faces.

(g) A right square pyramid is a solid bounded by a square face and four equal triangular faces.



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# P. S. Leaving Literature.

## HORATIUS.

## LESSON LI.

## A. B. CUSHING, B.A.

Thomas Babington Macaulay was born in the village of Rothley, Leicestershire, October 25th, 1800, and died in Kensington, London, December 28th, 1859. He was the son of Zachary Macaulay, a West Indian merchant, and a noted philanthropist. His university career at Trinity College, Cambridge, was a brilliant one. He gained the Chancellor's medal in 1819 for a poem on Pompeii," the same prize in 1820 for a poem on " Pompeii," the same prize in 1820 for a poem on " Evening." After graduation he was chosen a fellow of his college. The legal profession was his choice, and he took a very active and important part in politics ; was a clever debater and a powerful public speaker. Entering parliament in 1830, he took a foremost part in the great reform debates of that time. In 1834 he went to India as a member of the Supreme Council, of which he was the legal adviser. His special work in this case was the preparation of a new Indian code, which was intended to increase the civil rights of the Indian population. This, however, met with so much opposition from the English in India that it proved a failure. Returning to England in 1838, he was again elected to parliament from Edinburgh, and held that seat for many years. In 1857 he was created a peer of England, with the title Baron Macaulay of Rothley.

In addition to his duties of state he gave much attention to literature. As a writer of English prose he is unsurpassed, if not unequalled, by any of the writers of this century. Besides many fine essays on numerous topics, his "History of England" has gained for him a world-wide reputation as an author. As a poet he is of less note, though his ability in that field also is proven by his "Lays of Ancient Rome," from which "Horatius" is taken.

#### EXPLANATORY.

The year of the city ccclx .- that is 360 years after the foundation of the city of Rome, which, according to tradition, was 753 B.C. The legend regarding Horatius has two different versions in different Roman writers. One version makes Horatius defend the bridge alone and perish in the river. Macaulay gives in English verse the story, as told by Livy, the Roman historian. The story came down to later-day Romans in the form of a ballad poem, which is supposed to have been about the year 360, or 120 years after the war which it celebrares, and just before the taking of Rome by the Gauls. "The author," says Macaulay, " seems to have been an honest citizen, proud of the military glory of his country, sick of the disputes of factions, and much given to repining after good old times that had never really existed." Historical researches show that this as well as many other ancient Roman legends have little or no basis in fact. The truth regarding Porsena is rather that he subjugated Rome and compelled its people to do homage to him. Still

the lack of historical basis does not mar the poetical effect, for the poem is valuable as a good reproduction of the style and spirit of the old legendary ballads.

Page 247. Lars.—This is a title equivalent to our "lord" or " prince."

Clusium .- A city of what was then called Etru-(If possible consult a map of ancient Italy and locate the places mentioned in this poem.)

Nine Gods .- The Etruscans-the inhabitants of

Etruria-recognized nine chief deities. Tarquin.-This was Tarquinus the Proud, the last of the ancient kings of Rome. He had been expelled from the throne, and had appealed to Porsena for help to regain it.

Trysting day .- A day of meeting.

East and west .- Notice that the words and phrases of these lines suggest the hurry and bustle of the thing described, the repetition of words and clauses, and the connectives and and from gives this stirring effect. Page 248.—Where scowls the far famed hold.-

Observe the personal metaphor in "scowls," " hold," = stronghold or fortress.

Fringing the southern sky .- Sardinia is not, of course, directly south, rather south west. Show the force of "fringing."

Massilia's triremes-fair-haired slaves .- " Massilia" is the ancient name of Marseilles, a city on the south coast of France, in those days a great commercial centre. A trireme is a vessel having three banks of oars (tria, three; remus, an oar). The fair-haired slaves were natives of western Europe, whom Roman writers describe as fairhaired.

Tall are the oaks.-Compare this with "the oaks are tall." Which is preferable? Give reasons for your answer.

Mere. - A poetic word for lake, derived from mare, the sea.

. feet .- The girls were en-The must . gaged in pressing the juice from the grapes by treading upon them in the vat. New wine is called must.

Traced from the right.-Instead of writing from left to right, as we do, some ancient languages were written from the right to left, e.g., Hebrew and Phœnician.

Verses .- This reminds us that all writing in very ancient times was in the form of verse.

Seers of yore .- By consulting the wise sayings and prophecies of the sages of former days the "thirty chosen prophets" professed to have superior wisdom, and were the advisers of the king in matters of war and in other important affairs of state.

Page 249. Nurscia .- The Etruscan goddess of fortune.

Sutrium.-A small town in the southern part of Erruria. Not far from Rome. This was the appointed place of meeting.

Tusculan Mamilius .- Tarquin's son-in-law, who lived at Tusculum, a town in Latium, south and east of Rome.

Yellow Tiber .- The water of the Tiber has a yellowish tinge, the result of the yellow clay through which it passes. Trace this river's course.

To Rome men took their flight .- When war threatened in those early times it was customary for the country people to flock to the towns and cities for the protection afforded by the walls.

The rock Tarpeian .- This was a lotty rock whereon the citadel of Rome was built, and from one side of which criminals were hurled to death.

Fathers of the city .- The Roman senators. Nor house, nor fence, nor dovecote .- What is of

especial note regarding the order of words in this phrase ?

Verbenna Astur .- Etruscan chiefs ; Porsena's allies

Taniculum .- This was a fortress on the right bank of the Tiber, the city proper being built on the left or south bank.

Page 250-1 wis .- Old English verb meaning to know.

Consul.-One of the two chief magistrates of Rome. Two consuls were elected every year by the Senate.

Girded up their gowns .- The long, loose garments of those days had to be fastened up when there was need to move the limbs quickly

And plainly and more plainly .- Note the repitition of this phrase in the following lines. Such an arrangement is called *anaphora*. In this con-nection note also how the language seems to imitate the commotion of the advancing army

Twelve fair cities .- The cities of the Etruscan league; some of which have already been mentioned.

Four-fold shield .- A shield made of four thicknesses or layers of hide.

Brand.-The sword is called a brand from its appearance when flashing in the light.

Page 251-Sextus.-The son of Tarquin. His villaioy was the immediate cause of the expulsion of the family. Notice the climax in the following lines, and how it helps to express the scornful greeting.

" To every man."-Observe the direct narration in this part. It is, no doubt, employed because better suited to express the lofty sentiment. When used it gives to a poem the dramatic quality as it then approaches the form of the drama.

The holy maidens.-The vestal virgins or priestesses of Vesta, whose duty it was to keep the sacred fire continually burning in the temple of that Vesta was a household divinity, the goddess. patroness of household virtues, and her emblem was fire.

A Ramian .- In the early days of Rome there had taken place an amalgamation of three tribesthe Ramnes, the original Romans ; the Tities, to which Herminius belonged ; and the Suceres, of which it is supposed Horatius was a member. This trio, representing the three tribes, would be a popular one among the Romans generally. Page 252-Tribunes beard the high.-The tri-

bunes were the representatives of the lower classes, and were generally the opponents of the patricians or nobility.

Now Roman is to Roman .- What time is meant? See introductory note.

Came flashing back .- Note the imitative harmony.

Sicken in Ilva's mines .- Ilva is the ancient

name for Elba, which was then, as now, noted for its iron mines.

Page 253-Umbrian powers.-Umbria was to the north and west of Etruria and Nequinum on Nar was one of its strongest cities. the river.

Ostia .- The seaport of Rome.

Page 254-She wolf's litter.-The Romans. An allusion to the well-known story of Romulus and Remus being suckled by a she-wolf.

And the pale augurs .- The business of the Roman augurs was to interpret the omens or to foretell events by some sort of divination. The falling of the thunder-smitten oak would be considered an omen, and hence the allusion to the augurs. Note the beauty of the simile between the Lord of Luna and the falling oak.

Page 255-Welcome Sextus.-Note the sarcasm and how the actions of Sextus, here and farther on, are in keeping with his mean and cowardly spirit.

Page 256-Like a horse.-Show the corresponding points of likeness in this simile.

The white porch of his home .- What especial effect has this line?

O Tiber .- The river god of the Tiber. Celebrated rivers of antiquity were supposed to have their guardian deities.

Page 257-Heaven help him .- Note the noble spirit of Porsena in contrast with the treachery of Sextus.

Public right.- Public property. The amount of land described in the next line was iugurum, nearly equivalent to our acre.

Note, in the conclusion, the graphic picture of a Roman household at the time to which the poem is assigned (see under title).

# THE HANGING OF THE CRANE.

#### (CONCLUDED.)

#### STANZA VII.

This prelude is again beautiful and appropriate. "Laugh and sing." Refers to the glad appear-ance everything has after a rain storm has passed away

"Ruby." The red appearance of the sun is here suggested.

"Drop down." How quickly the sun seems to sink on such a night as this ! Watch it some time in order to be able to feel the appropriateness of the description.

"Golden wedding." The fiftieth anniversary of the wedding-day.

"The trooping children .... golden hair." Did you ever watch a crowd of children in circumstances such as these? Then you will be able to fally appreciate the beauty of the lines. Long-fellow was truty the "children's poet." "Corridor." A long hall or passage. "Monarch of the moon." This refers to stanza

iii., line to. "Ancient bridegroom and the bride." Still as loving as they were fifty years ago, therefore called bride and groom still. What a touching pour-Iraya' this is !

" Forms and features multiplied." Reproduced in their children and grandchildren.

"As the reflection ... , endless seems." These two similes are, perhaps, the most "bald and barren" in the poem. How much stronger the poem would be if it had ended with "multiplied." The simile is intended " to promote the clearness of thought and expression." The picture presented, if appropriate, is instantly realized as an "inter-preting instrument." Do these similes promote clearness? Do you recognize the picture of the lamps as an "interpreting instrument"? That is, can you interpret the meaning of "forms and features multiplied" by the picture of the lamps on the bridge ?

'Flutter awhile." How beautifully this metaphor brings to our minds the timidity of the maidens.

"Strength elate." Filled with a knowledge of their strength.

"Van and front." These words are used in their military sense. "Van" meaning advanceguard or fore-front.

"Eager as champions to be." Eager to be as champions. Anxious to take the place of cham-

pions in the struggle of life. "Knight-errantry." To go, as knights of old,

on a quest in search of adventure. "Lyric muse." The inspiring power of lyric poetry, often personified, and represented as a deity. There were nine muses. Their names are inserted here for reference. Calliope, muse of epic poetry; Clio, of history; Euterpe, of lyric poetry; Thalia, of comedy; Melpomene, of tragedy; Terpsichore, of dancing; Erato, of erotic poetry ; Polymnia, of sacred song ; Urania, of astronomy.

"The phantom." Fame. Notice how apt the description is in this and the following line. Fame always beckoning onward but ever eluding the pursuer

The last four lines are especially vivid and vigorous. This is due to the writer's use of "Apos-trophe," that is "a *turning from* the natural course of the thought, in which a person or thing is spoken of, to address it directly, as if it were present." This figure always promotes emphasis. "Thrills of fire and frost." Alternating hope

and disappointment.

"Dark and dead." How cheerless the world would be but for our restless hopes and sometime reverses.

# Grammar.

# QUESTIONS TO BE ANSWERED IN OUR NEXT ISSUE.

(a) As one who walking in a forest sees A lovely landscape through the parted trees, Then sees it not for boughs that intervene Or, as we see the moon sometimes revealed Through drifting clouds, and then again concealed,

So I behold the scene.

(b) Go, ask the infidel what boon he brings us, What charm for aching hearts he can reveal, Sweet as that heavenly promise) Hope sings us, "Earth has no sorrow that God cannot heal."

1. Classify the above extracts as sentences, write in full each clause in both, and state their kind and relation.

2. Classify the adverb phrases in sentence (a), above, giving their kind and relation.

3. Give the kind and grammatical relation of the underlined words in both extracts.

4. Parse in full the following words :

Sentence (a) sees (line 1), that (line 3), concealed (line 5).

Sentence (b) that (line 3), promise, us (line 3). State the grammatical function of can, in lines 2 and 4.

## ANSWERS TO QUESTIONS IN OUR LAST ISSUE.

#### I. INFINITIVES.

- (a) All we want to be let alone.
- (b) He likes studying mathematics.
- (c) It is good to be here.
- (d) He had no choice but go.
- They were about to depart. (e)
- They resented having been insulted. (1)
- (g) We have come to hear you. (h) He induced them to make the attempt.
- (i) I love you too much to let you go.
- (i) Nobody imagined him to be listening.
- (a) To be let: Function-used subjectively subject of the verb is.\* xv. 7. Studying : Function-used objectively,
- (b)object of the verb like. xv. 8.
- (c) To be : Function-used subjectively, as logical subject of the verb is. xv. 7. (d) To go: Function-used objectively, as
- object of preposition but. xv. 9.
- (e) To depart : Function-used objectively, object of the preposition about. xv. 9.
- (f) Having been insulted : Function-used objectively, as the object of the verb
- resented. xv. 8. (g) To hear: Function-used adverbially, as
- the adverbial object of come. xv. 12. (h) To make : Function-used objectively, direct object of induced. xv. 14.
- (i) To let : Function-used adverbially, modifying much. xv. 12.
- (j) To be listening; Function-used as the direct object of *imagined*. xv. 14.

Thus it will be seen that the various uses of the infinitive mood are :

- (a) Subject of a verb.
- (b) and (f) Object of a verb.
- (c) Logical subject of a verb.
- (d) and (e) Object of a preposition.
- (g) Adverbial object of a verb. (h) and (j) Direct object of a verb.
- (i) Adverbially to modify an adverb.

## II. NOUN CLAUSES.

Uses of noun clauses are : I. Subject nominative as, That he took it is true.

2. Predicate nominative as, That was what I intended to do.

3. Appositive nominative as, The statement that he took it is true.

\*References are to chapter and section of H. S. Grammar.

4. Nominative absolute as, That he wrote it being admitted, what follows?

5. Object of a verb as, He denied that he had taken it.

6. Object of a preposition as, The truth of what he said is evident.

7. Object in apposition as, He contradicted the report that he took it.

8. Predicate objective after an infinitive as, I believe the truth to be *that he did it himself*.

9. Adverbial objective as, I am confident that he will succeed.

III. ADVERBIAL CLAUSES.

(a) Whither I go ye cannot come.

(b) Come down ere my child die.

(c) Except ye see signs and wonders ye will not believe.

(d) He sang till his throat was hoarse.

(e) He is not so rich as you suppose.

(1) As you are here, I will go.

- 7. (a) Clause-Whither I go."
  - Function-Used as an adverb of place, and to modify can come.
  - (b) Clause—Ere my child die. Function—Used as adverb of time, and to modify come.
  - (c) Except ye see signs and wonders. Function—Used as an adverb of condition and to modify will believe.
  - (d) Clause—Till his throat was hoarse. Function—Used as an adverb of result and to modify sang.
  - (e) Clause-As you suppose.
  - Function-Úsed as an adverb of degree and to modify so rich.
  - (f) Clause—As you are here. Function—Used as an adverb of cause and to modify will go.

From the above, adverbial clauses may be classified as adverbial clauses of *place*, time, condition, result, degree and cause.



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Bank, Dr. To cash deposit		513 25
Bank, Cr. By cheque for rent		150 00
Jones, Gowan & Co., Cr. By goods on acct.		536 00
Bank, Dr. To cash deposit		400 00
J. P. Wilson, Dr. To 1 ton flour @ \$1.60 per cwt.		32 00
W. P. Patterson, Cr. By note in favor of Tompkins		50 00
Bank, Dr. To cash deposit		200 00
Bank, Cr. By cheque, prepaying note in favor of Jones, Gowan & Co.		1415 00
J. P. Wilson, Cr. By cash " loss	8 00	32 00

CASH BOOK.

Dr. Cr.

une	17	To Stock investment	513	25	51329	
.6	18	To Mdse sales this day	375	00	5-5-5	1
66	10	" Lot	900	00		
66	10	" Mdse sales this day	284	00		
66	20	By Bank deposit			1400 00	Э
**	20	To Mdse sales this day	251	00		
66	21	By Bank deposit			200 00	Э
**	21	" Circulars and water rates			150	0
66	21	To Mdse sales this day	500	00		
"	22	" J. P. Wilson By balance	8		7030	0
			2831	25	2831 2	5





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Net Net	investment worth	\$4	00 95		
let	loss	\$	516	05	

# Algebra.

In factoring trinomials you will notice that if the last sign is + then the signs of the factors are alike, that is each is + or each is -. A look then at the first sign will decide what the signs are; if it is + both are +, if it is - both are -. For instance, to factor  $x^2+7x+12$ . The last

sign is + then the signs of the factors are either each + or each -. We then look at the first sign; it is +, therefore they are each +. Now what two numbers multiplied will give 12, and added will give 7. The answers are 3 and 4. There-

fore the factors are (x+3)(x+4). But if the last sign is – then the signs of the factors are different, that is, one is + and the other . A look then at the first sign will decide what the signs are; if it is + then the larger number is +, if it is - then the larger number is -

For instance, to factor  $x^2 + x - 12$ , we see the signs are not alike and that the large number is +. We then ask what number multiplied will give - 12 and added will give +1. The answer is - 3 and +4. The factors then are (x-3)(x+4).

To factor  $2x^2 + x - 28$  we factor 2 into 2 and I; we then factor 28 into 7 and 4, then arrange them with signs such that the middle term will become +1. Thus  $\frac{2-7}{1+4}$ . You see here that by multiplying +1 and -7 and +2 and +4 and adding the result we get +1.

## EXERCISE I.

Do not be satisfied until you can read the factors of these at sight.

1.	$72x^2 - 145x + 72.$	11. $I - 100a^6 b^4 C^2$ .
2.	$2 - 3x - 2x^2$ .	12. S1p <sup>4</sup> z <sup>6</sup> - 25b <sup>2</sup> .
3.	$7 + 10x + 3x^2$ .	13. $p^2q^2 - 64a^4$ .
4.	$20 - 9x - 20x^2$ .	14. $a^2b^4c^6 - x^{16}$ .
5.	$4 - 5x - 6x^2$ .	15. $36x^{36} - 49a^{14}$ .
6.	$18 - 33x + 5x^2$ .	16. 121a <sup>2</sup> - 81x <sup>2</sup> .
7.	$24 + 37x - 72x^3$ .	17. 3-1a <sup>4</sup> - 49x <sup>4</sup> .
8.	$x^2y^2 + 23xy - 420$ .	$18.49 - 100k^2$ .
0.	$7x^2 - 10 - 6$ .	19. $91^4 - 121.$
10	$14x^2 + 20x - 15$	20. $16x^{16} - 9y^6$ .

#### EXERCISE II.

Ι.	21 + 3x + 1.	11. $2x^2 + 9x + 4$ .
2.	$5x^2 + 11x + 2$ .	12. $3x^2 + 7x - 6$ .
3.	$2x^2 - x - 1$ .	13. $3x^2 + 23x + 14$ .
4.	$3x^{2} + 13x - 30$ .	14. $2x^2 - 5xy - 3y^2$ .
5.	$4x^2 + x - 14$ .	15. $3x^2 + 11x + 6$ .
6.	$12x^2 - 23xy + 10y^2$ .	16. $6x^2 - 31x + 35$ .
7.	$15x^2 - 77x + 10.$	17. $3x^2 + 41x + 26$ .
8.	$24x^2 - 29xy - 4y^2$ .	18. $8x^2 - 38x + 35$ .
0	$3 + 11x - 4x^2$ .	19. $15x^2 + 224x - 15$ .
10	$8 + 6x - 5x^2$	20. $12x^2 - 31x - 15$ .

#### EXERCISE III.

It is thought this paper will be found useful for review at this stage of the work.

1. If b=2, c=4, d=6, find the value of  $3b + (2c-1)^4 + (3b-(2c-d)^2)^4 - (3b-(2c-d)^2)^2$ . 2. Reduce to its simplest form  $1 - (1-(-4x))^2$ 

+  $\langle 2x - (3 - 5x) \rangle - \langle 2 - (-4 + 5x) \rangle$ . 3. Add 9(x<sup>2</sup>+y<sup>2</sup>), - 3xy, x<sup>2</sup> - 7xy+y<sup>2</sup>, Ioxy - $10(x^2 + y^2).$ 

4. From 4(a-b)+3(x+y), take 3(a-b)-5(x-b)+y).

5. Divide  $8a^3 - b^3 + c^3 + 6abc$  by 2a - b + c.

- 6. Factor the following expressions :

  - (a)  $2bc+b^2+c^2-a^2$ . (b)  $(a-b)^2-(c-d)^2$ .

7. Find the value of x in the equation  $(x-5)^2$  - $(5-x)^2 + 10x(x-2) = (5x-8)(2x-1)$ 

8. Find the area of an oblong whose sides are respectively 9 feet greater and 6 feet less than those of a square equal to it.

9. Six years hence a boy will be 4 times as old as he was 6 years ago. How old is he?

10. Find 4 consecutive numbers whose sum is 222.

11. Fred and Bob play at marbles. Fred begins with 16 and Bob with 12; after the game Fred has thrice as many as Bob. How many has be won?