THE END OF EDUCATION.

" It is the correct thing to have a degree. It is the key that opens the door to the profession I have chosen. The course of study pursued at college and the associations of college life develop character."

The above are some of the reasons usually assigned for attending a college. Probably all persons will admit that the last is the only adequate reason. Yet there is a considerable difference between admitting a statement to be true, and being practically influenced by it. Yet few will hesitate to admit that the end which every educational institution should set before itself, is the development of character in its students. All the great men whom the world has ever seen, unite in declaring that the true aim of education is to develope the man, and not simply to increase the amount of what he knows. To increase the knowledge of anyone is found to be a valuable and indeed an indispensable " means" for the development of character, but we must carefully distinguish between the means used and the end sought. The end at which the college should aim is as we have said, to make " men" of its students, and the end at which the student should aim is to be a " man." Each day he is striving to get up his class work, and towards the close of the session he is striving to be ready for exams. This continual striving for what we have called the means, is very apt to make a student mistake the means for the end. Hence it becomes necessary for him to remember continually that the ultimate aim of all his work is, not the passing of such and such exams, but the development of the highest that is in him. One of the most ancient literatures tells us that man was made to have dominion over the animals. Let us see to it that we dominate the animal within ourselves; for the true measure of a man is not what he knows "but what he is." Not that we would belittle knowledge, far from it, but knowledge is simply a means, a developed character is the end.

But, it may be asked, " of what moral value is a determined struggle on the football field ; or the solution of a knotty problem in mathematics ; or the mastery of a difficult passage in Greek ?" Much. Every such effort strengthens the" will" and thus enable us to keep the body under. Every time we overcome a difficulty we raise ourselves above it, for " we rise by the things that are 'neath our feet." These efforts then teach us how to erect ourselves above ourselves, and in this chiefly lies their value as means for the developement of character.

It is said that some cannibal tribes have the idea that when they eat the body of one who was strong and brave, his bravery and strength go to augment theirs. We may smile at the notion, and yet the idea is literally true when applied to education. When we master an author his mental strength goes to augment ours. And the moral value of such an effort, when it is undertaken in the right spirit, is quite immeasurable. These illustrations may help to emphasize the main thought of this article, that the true aim of every student is to make the most of the highest that is in them, not simply to increase his knowledge, but to develope himself.

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(1.) Find value of $m^3(c \cdot n^2) \div n^3(m \cdot c^2) + c^3(m \cdot n)^2 + mnc(mnc \cdot 1) + 7.$

When $n \cdot m^2 = 0$ expand all but third term and arrange,

$m^3 c \cdot m^3 n^2 + n^3 m \cdot n^3 c^2 + m^3 n^2 c^2 \cdot mnc + c^3 (m \cdot n)^2 + 7.$

Group terms,

$(m^3 c \cdot mnc) + (mn^3 \cdot m^3 n^2) + (m^3 n^2 c^2 \cdot n^3 c^2) + c^3 (m \cdot n)^2 + 7.$

$= mc(m^2 \cdot n) + m \, n^2 (n \cdot m^2) + n^2 c^2 (m^2 \cdot n) + c^3 (m \cdot n)^2 + 7.$

$= c^3 (m \cdot n)^2 + 7,$ since $n \cdot m^2 = 0.$

$= c^3 (m \cdot m^2) + 7.$

(2.) Find remainder when $9a^{13} + 4a^6 \cdot 27a^5 + 1$ is divided by $a^8 + 2a^4 + 1.$

Assume $a^8 + 2a^4 + 1 = 0. \therefore a^8 = -2a^4 \cdot 1.$

Substitute for a^8 in $9a^{13}$ its value,

$9a^5 (-2a^4 \cdots 1) + 4a^6 \cdot 17a^5 + 1 = -18a^9 \cdot 86a^5 + 4 a^6 + 1.$

Substitute again

$-18a(-2a^4 \cdot 1) - 86a^5 + 4a^6 + 1.$

$= 36a^5 + 18a^5 + 4a^6 + 1 = 4a^6 + 18a + 1. \; ans.$

(3.) If $x + a$ is a common factor of $x^2 + qx + 1$ and $x^3 + px^2 + qx + 1,$ prove $(p \cdot 1)^2 \cdot q (p \cdot 1) + 1 = 0.$

Put $x + a = o$ or $x = -a.$ Substitute in each of the given expressions remembering that the result is obtained in each case the remainder after division by $x + a.$

$\therefore \; a^2 \cdot qa + 1 = 0. \qquad (1) \}$ since the divi-
and $\cdot a^3 + pa^2 \cdot qa + 1 = 0. (2) \}$ sions are exact

Subtract (2) from (1) $\qquad a^3 \cdot (p \cdot 1) a^2 = 0.$

From this we obtain $a = p \; -1.$

Substitute this value for a in $(1), (p \cdot 1)^2 \cdot q(p \cdot 1) + 1 = 0.$ It is obvious that we might, by substituting in (2) also prove $-(p \cdot 1)^3 + p(p \cdot 1)^2 \cdot q(p \cdot 1) + 1 = 0$ which is the second condition of the divisibility of the given expressions by $x + a.$

(4.) Resolve in factors :

(1.) $7x \cdot 42y \cdot 2x^2 + 9xy + 18y2.$

$= (7x \cdot 42y) \cdot (2x^2 \cdot 9xy \cdot 18y^2)$

$= 7(x \cdot 6y) \cdot (2x + 8y)(x \cdot 6y)$

$= (x \cdot 6y)(7 \cdot 2x \cdot 3y)$

(2.) $x^6 \cdot 3x^5 + 3x^4 \; x^3 \cdot 8 \qquad = (x^3 \cdot x)^3 \cdot 8$

$= (x^2 \cdot x \cdot 2) \cdot \{ (x^2 \cdot x)^2 + 2(x^2 \cdot x) + 4. \}$

$= (x \cdot 2)(x + 1)(x^4 \cdot 2x^3 + 3x^2 \cdot 2x + 4)$

CORRESPONDENCE.

MR. EDITOR,—I heartily congratulate you on the first issue of the HIGH SCHOOL JOURNAL. It came to me to-day and I have read every item in it—even the advertisements, which were not without interest, as I found in them the names of three old class mates. If I were not a clergyman I should like to have my business card in such good company. I was one of the first boys at the High School and shall always take a lively interest in all that goes on there. Please enter my name as a subscriber to the JOURNAL, and may your new literary venture be crowned with success. Yours very truly,

C. SCADDING.

Middleton, N.Y., Dec. 10th, 1890.

[The above is one of a number of such letters received by us and we desire to express our thanks for the kindly encouragement.]