

MATRICULATION EXAMINATION, JUNE,
1882.

1. Add together and simplify

$\frac{1}{11} \left\{ \frac{1}{10} + \frac{1}{2} (\frac{1}{3} - \frac{1}{4}) \right\}$ of a pound, and
 $\frac{1}{4}$ of $\frac{1}{11}$ of $\frac{1}{4}$ of a penny.

2. Express
- $\sqrt{\frac{0.0864 \times 753}{0.00391}}$
- correctly to the nearest integer.

3. Express
- $\frac{1.5476 \times 10.618}{2.6547}$
- in its simplest form.

4. A reduction of 20 per cent. in the price of apples would enable a purchaser to obtain 120 more for a sovereign. What may the price be before reduction?

5. A merchant lays out £1000 in buying cloth in England at 3 shillings a yard. He takes the cloth to France at an expense of 3 pence a yard for carriage, packing, etc., and paying a duty of 42 centimes a metre. He sells half the cloth at 8 francs a metre, the rest at 6 francs a metre. What profit does he make?

[Express the result in pounds, shillings, and pence; and assume 25 francs to be equal to £1, and a metre to be 39 $\frac{1}{8}$ inches.]

6. Simplify

$$\left(\frac{x}{x-1} - \frac{1}{x+1} \right) \cdot \frac{x^3 - 1}{x^3 + 1} \cdot \frac{(x-1)^2(x+1)^2 + x^2}{x^4 + x^2 + 1}$$

7. Find the sum of five numbers in arithmetical progression, the second being 4 and the fifth
- $8\frac{1}{2}$
- .

Also find the sum of five numbers in geometrical progression, the third being 3 and the fifth 27.

8. Divide £5 between a man, a woman, two boys, and a girl, so that the man has as much as the two boys and the girl together, the woman and girl together as much as the two boys together, and the man and girl together half the whole amount.

9. Find the greatest common measure of

$$x^4 + 14x^3 + 67x^2 + 126x + 72,$$

$$x^4 + 3x^3 - 31x^2 - 123x - 90,$$

$$x^4 + 13x^3 + 49x^2 + 27x - 90.$$

10. A man pays £150 a year for rent, water-rate, and poor-rate, the rates being charged on the rent he actually pays. If

the rent were reduced 10 per cent., the rate per £ of the poor-rate 25 per cent., and of the water-rate 5 per cent., he would pay in all £130 1s.; whereas if poor-rates were doubled and water-rate reduced 5 per cent., the rent being as at first, he would pay £169 10s. What did he pay for rent, poor-rate, and water-rate respectively?

CLASSICS.

G. H. ROBINSON, M.A., WHITBY, EDITOR.

UNIVERSITY OF LONDON.

MATRICULATION EXAMINATION—
JANUARY, 1882.

Examiners—J. S. Reid, Esq., LL.M., M.A.,
 and Dr. Leonhard Schmitz, F.R.S.E.

GREEK.

I. *Xenophon*—Anabasis VI.

Translate into English :

Α. Καὶ ὁ Ξενοφὼν ἐπεὶ ἔώρα πλείονος ἐνδέον, παρελθὼν εἶπεν, ἀλλ', ὦ ἄνδρες, ἔφη, ὡς πάνν εἶδθη, ὁμνῶν ὑμῖν θεοὺς πάντας καὶ πάσας ἤ μὴν ἐγὼ ἐπεὶ τὴν ὑμετέραν γνώμην ἡσθανόμην, ἐθυόμην εἰ βέλτιον εἶη ὑμῖν τε ἐμοὶ ἐπιτρέψαι ταύτην τὴν ἀρχὴν καὶ ἐμοὶ ὑποστήναι· καὶ μοι οἱ θεοὶ οὕτως ἐν τοῖς ἱεροῖς ἐσήμνησαν ὥστε καὶ ἰδιώτην ἂν γινώσκειν ὅτι τῆς μοναρχίας ἀπέχεσθαι με δεῖ. οὕτω δὴ Χειρίσοφον αἰροῦνται. Χειρίσοφος δ' ἐπεὶ ἡρέθη, παρελθὼν εἶπεν, ἀλλ', ὦ ἄνδρες, τοῦτο μὲν ἴστε ὅτι οὐδ' ἂν ἐγῶγε ἐστασίαζον, εἰ ἄλλον εἴλεσθε· Ξενοφῶντα μόνον, ἔφη, ὠνήσατε οὐχ ἐλόμενοι· ὡς καὶ νῦν Δέξιππος ἤδη διέβαλεν αὐτὸν πρὸς Ἀναξίβιον ὅτι ἐδύνατο καὶ μάλα ἐμοῦ αὐτὸν σιγά-ζοντος. ὁ δ' ἔφη νομίζειν αὐτὸν Τιμασίῳ μᾶλλον συνάρχειν ἐλελήσθαι Δαρδανεῖ ὄντι τοῦ Κλεάρχου ἀτρατεύματος ἢ ἐαυτῷ Λάκωνι ὄντι.

Β. Ταῦτα παρελαίωνων ἔλεγε καὶ ἅμα ὑφηγείτο ἐπὶ φύλαγγος, καὶ τοὺς, πελ-
 ταστὰς ἑκατέρωθεν ποιησάμενοι ἐπορεύ-
 οντο ἐπὶ τοὺς πολεμίους. παρήγγελτο δὲ
 τὰ μὲν δόρατα ἐπὶ τὸν δεξιὸν ὤμον ἔχειν,
 ἕως σημαῖνοι τῇ σάλπιγγι· ἔπειτα δὲ εἰς
 προβολὴν καθέντας ἔπυσθαι βάδην καὶ
 μῆδ' ἀδρόμῳ διώκειν. ἐκ τούτου σύν-