

ratio of the circumference of a circle to its diameter to be 355 : 113.

3. If $x = \frac{3'14159}{3600}$ find the value of x^3 and x^3 to six places of decimals.

4. Find the price of 659 bales of cotton, each weighing 1 cwt. 1 qr. 21 lbs., at £2 3s. 14d. per cwt.

5. Find the square root of $34967\frac{2}{3}$ to four places of decimals.

6. Find the simplest form of the expression.

$$\frac{(1-a^3)(1-b^3)(1-c^3) + (a-bc)(b-ac)(c-ab)}{1-abc}$$

7. A. and B. together can perform a piece of work in 24 hours, A. and C. in 30 hours, and B. and C. in 40 hours; in what time will each be able to perform it when working separately?

8. Solve the system of simultaneous equations—

$$2x + 4y + 3z = 0; \quad x - 2y - z = 20; \quad 3x + 2y - z = 32.$$

9. Divide the number 90 into 4 parts, such that if the first be increased by 2, the second diminished by 2, the third multiplied by 2, and the fourth divided by 2, the four qualities thus obtained shall be equal to each other

10. Find the sum of the series :—

$$(1) \ 1 + 2x + 4x^2 + 8x^3 + \dots + 2^n x^n;$$

$$(2) \ 1 + 2x + 3x^2 + 4x^3 + \dots + nx^{n-1}.$$

Latin Grammar and Composition.

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1. Decline in both singular and plural *bos ingens*, *vir locuples*, *acrior conatus*; and in the singular only *unusquisque*, *ulterius*, *insidiandum*, *caro bovina*, and *genus audax*.

2. Give the comparative and superlative of *locuples*, *sagax*, *humilis*, *iners*, *inferus*, *superus*, *benevolus*.

3. Parse 2nd give the first person of the indicative of *oritur*, *ortus*, *potiremur*, *nostri*, *nactus eris*, *condet*, *condat*, *obliviscerere*, *eundum*.

4. Write down the first person singular of the perfect active, the supine, and the pre-

sent infinitive of *aufero*, *decerno lego*, *frango*, *domo*, *audeo*, *vincio*, *cado*, *pingo*, *solgo*.

5. Mention the prepositions which govern the ablative, and those which govern both the ablative and accusative, and state when they take the one case, and when the other.

6. In what cases is the conjunction *si* followed by the verb in the indicative mood?

7. Give the adverbs of *magnus*, *continuus*, *improvisus*, *meritus*, *felix*, *comis*.

8. Mention some instances in which the locative case still exists in Latin.

9. What is understood by the term "ablative absolute"? and under what conditions can it be used?

10. Translate into Latin :—

(N.B.—Great importance is attached to the correct rendering of these sentences.)

(a) It is of great interest to your parents that you should be diligent.

(b) Cicero is said to have been the most eloquent of all Roman orators.

(c) Granting that the cause of the war had been a just one, still the general ought not to have acted as he did without the authority of the senate.

(d) I had hoped to see Pompey before he started from Rome.

(e) Even if I had known his design to murder his opponent, I could not have prevented him.

(f) Although Cæsar was ready to make many concessions, Pompey, trusting to the support of the nobility, refused to listen to any proposal of conciliation.

Greek.

I.

Homer : *Odyssey*, Book IX.

Translate into English : ll. 177-192; ll. 328-340; ll. 480-490.

II.

1. Parse *ᾠσε*, *δοῖατο*, *ἐδμέναι*, *θείω*, *ἴτην*, *δέδεντο*, *ἦδη*, *ἔχελον*, adding the 1st pers. sing. of the principal tenses of each verb.

2. Distinguish *οἶων*, *οἶων*, *οἶων* : *ὄρος*, *ὄρος*, *ὄρος* : *αὐτή*, *αὐτή*, *αὐτή*.

3. Write out the declension of *ῥῶς*, *νηῦς*, *τεν*, *ἄλσει*, *ναυτίων*, giving the Attic forms