

Es is kein leerer schmeichelnder Wahn,
 Erzeugt im Gehirne des Thoren;
 Im Herzen kündet es laut sich an:
 Zu was Besserm sind wir geboren;
 Und was die innere Stimme spricht,
 Das täuscht die hoffende Seele nicht.

SCHILLER.

2. Translate into German—(1.) Where is your brother just now? (2.) He is studying medicine in London. (3.) How do you like Melbourne? (4.) It is a fine city, but much too large to please me. (5.) Oh, yes! I know you like the quiet of a small town best. (6.) I wish to buy a gold watch for my daughter, and one for my son. Will you show me some? (7.) Here are some of all kinds; choose for yourself. (8.) I prefer this one. What is the price? (9.) I cannot let you have it for less than twenty-five guineas. (10.) At what o'clock do you dine here? (11.) In winter at six o'clock, but in summer at half-past six. (12.) Will you allow me to introduce this gentleman to you? (13.) He is a friend of mine, who has just returned from his travels. (14.) With pleasure. Sir, I am glad to make your acquaintance. (15.) I am not sorry to get back at last; it is three years since I left this country.

3. Give the meaning and the nom. pl. of: *der Lachs, der Morast, die Wand, das Amt, der Sporn, der Stachel, der Vormund, das Thor, das Gemach, das Studium*.

4. From the following adjectives form abstract nouns, prefixing the definite article: *finster, schön, reich, müde, warm*.

5. What are the chief exceptions to the rule that the names of metals are neuter?

6. Mention five words that have no singular.

7. Give in full the impers. verb *es friert*.

8. Write in full the pres. ind. of *anfangen*.

9. Form adjectives from the adverbs: *jetzt, hier, gestern, heute, damals*.

10. Translate: at midnight, at home, at the ball, at school, at sunrise.

11. The disjunctive pronouns for mine, &c., assume three forms in German. Which are they? Give all three in translating, "Is this his book? No, it is *mine*."

12. What prepositions govern the accusative only?

Algebra.—For Class D, and Junior Civil Service. Time allowed: 3 hours. [Optional.]

1. Find the value of $(x+y+z)(x^2+y^2+z^2-xy-yz-zx)$, when $x=1$, $y=-2$, $z=3$; and of $\frac{[a-3b(c+2b)][2b-a(3b+c)]}{c^2-2ab+3ac}$, when $a=5$, $b=-3$, $c=7$.

2. Find the continued product of $2a-bx+3cx^2$, $3b-2cx+ax^2$, $4bx^2-c-2ax$. Write your answer in descending powers of x , collecting the coefficients of like powers of x in a bracket.

3. Divide $6x^6-x^2y-61x^2y^4+10xy^5+2y^6$ by $2x^2+3xy-y^2$.

4. Resolve into elementary factors $12x^2-5xy-2y^2$, $3a^3b-81b^4$, $(2x^2-y)^2-(2y^2-x)^2$, $a^2x^2-b^2y^2+p^2-q^2-2(apx+bqy)$.

5. Find the highest common divisor and the lowest common multiple of $x^4+2x^3-4x^2-6x+3$, x^5+7x^2+9x-5 , $2x^3+3x^2-4x+1$.

6. Simplify $\frac{x^2}{ab} + \frac{(x+a)^2}{a(a-b)} + \frac{(x+b)^2}{b(b-a)}$, and $x - \frac{3x-2y}{3 - \frac{2(x+y)}{x-y}}$.

7. Solve the equation $\frac{x+1}{5} + \frac{x-1}{9} + \frac{x+2}{7} = \frac{x-4}{3} + \frac{x+5}{12} + \frac{x+3}{11}$; and, if $\frac{q}{qx-p} + \frac{p}{px-q} = \frac{a}{ax-b} + \frac{b}{bx-a}$, prove that $x^2=1$.

8. Divide 16 into three parts, such that the first may be to the second in the ratio of $\frac{1}{3}$ to $\frac{1}{5}$, and the second to the third as $\frac{1}{3}$ to $\frac{1}{5}$.

9. I have a rectangular piece of cardboard: cutting out equal squares from the four corners, I convert the remainder into a box (without lid), whose depth is equal to the side of the square which has been cut away, and whose sides and ends are the strips which remain along the sides of the cardboard. From another piece of cardboard equal and similar to the former piece another box is formed of twice the depth of the preceding one, and it is found that the volume of this second box is twice that of the first. Prove that the depth of the first box is $\frac{1}{12}$ of the perimeter of either piece of cardboard.

Algebra.—For Senior Civil Service. Time allowed: 3 hours.

[Alternative with Arithmetic.]

1. Find the value of $\left(\frac{1-x}{1+y}\right)^2 - \sqrt{\frac{1+x}{1-y}}$, when $x=\frac{1}{4}$, $y=\frac{1}{5}$.

2. Write down the coefficient of x^4 in the square of $a+bx+cx^2+dx^3+\dots$. Write down, also, the first three terms and the last three terms of the quotient, when a^m-b^m is divided by $a-b$, m being a positive integer.

3. Find the highest common measure and the lowest common multiple of $x^4+ax^3-2a^2x^2-3a^3x-a^4$ and $x^4-3ax^3+2a^2x^2+a^3x-a^4$.