

SUBJECT 4.—*Arithmetic and Law : A Knowledge of Mine Accounts ; Fractions, Decimals, Percentages, Square Root, Area of Rectangle, Trapezoid, Circle, &c. ; Measurement of Timber ; Calculation of Workable Coal in a Mine, &c. ; a Knowledge of the Coal-mines Act and Amendments.*

1. The area of a square being 35·500 square feet, what is the length of its sides ?
2. How much would a miner earn for 11 days' work, filling on an average $4\frac{3}{4}$ tons per day, at 2s. $4\frac{3}{4}$ d. per ton ?
3. Multiply $\frac{1}{4}$ of 37 by $\frac{2}{3}$ of 86.
4. In driving a heading 6 ft. 6 in. by 6 ft. by 120 yards long, the men to be paid at 9s. 6d. per cubic yard, how much will the work cost ?
5. How many square yards in a quadrilateral piece of land, one side being 40 yards long, parallel side 60 yards, the sides being 10 yards apart ?

Knowledge of Coal-mines Act.

1. State briefly the provisions of the Coal-mines Act, 1908, and amendments, relating to—
 - (a.) Ventilation.
 - (b.) Examination before men enter workings.
 - (c.) Safety-lamps and their treatment.
 - (d.) Minimizing dangers from ignition of fire-damp and coaldust.

In answering above, quote numbers of section or rule referred to.
