

1. Illustrate the process of subtracting fractions, and give the rule.
2. Illustrate and give the rule for multiplying a fraction by an integer; for finding the fractional part of a number.
3. Illustrate and give the rule for dividing an integer by a fraction; for dividing a fraction by a fraction.
4. Write a number involving billions and billionths. Numerate it. Illustrate the effect of removing the decimal point to the right; to the left. Illustrate the effect of annexing ciphers to a decimal.
5. Give the rule for reducing a common fraction to a decimal; for reducing a decimal to a common fraction.
6. Give the rule for multiplying decimals; for dividing decimals.
7. Write with abbreviations the tables of long measure — common, surveyors', circular, and metric. What is the standard unit in each? How many feet in a mile? How many yards?
8. Explain the following terms: geographical mile; statute mile; knot; league; furlong; fathom; cable length; span; hand.
9. How is the degree found? Its length is how determined? What is the length of a degree of latitude? What is the length of a degree of longitude on the equator? on the 40th parallel? on the 60th? on the 30th?
10. Describe the Gunter's chain; the surveyor's steel ribbon.
11. Show by examples how measures of surface are found. Write with abbreviations the tables of square measure — common, surveyors', and metric. How many square feet in an acre? how many square yards?
12. Show by examples how measures of volume are found. Write with abbreviations the tables of cubic measure, common and metric. What is meant by a cord foot? by a perch of masonry?
13. Write with abbreviations the tables of weight — avoirdupois, apothecaries', and troy; also by metric system. For what is each used? What is the difference in weight between the pound troy and the pound avoirdupois? between the ounce troy and the ounce avoirdupois? What is the long ton, and when is it used?