10. Two persons have to pay a debt of £29. Neither of them can pay it alone; but the first could if the other would give him two-thirds of his money, and the second could if the first would give him three-fourths of his. How much money has each?

11. I bought a flock of sheep for £240, lost three of them, and sold the remainder at 8s. a head more than I gave for them, and thus gained £157 by the transaction. How many did I buy?

GEOMETRY.

1. Show that two straight lines cannot have a common segment.

2. A parallel to the base, B C, of a triangle A B C, cuts the sides, produced if necessary, at D and E. Prove that the new triangle A D E has its angles equal to those of the original triangle A B C.

3. If a straight line be divided into any two parts, the squares on the whole line and on one of the parts are equal to twice the rectangle contained by the whole and that part together with the square on the other part.

4. Why may not algebraical or arithmetical proofs be substituted (as being shorter) for the demonstrations of the propositions in the Second Book of Euclid?

5. Equal straight lines in a circle are equally distant from the centre. Also state (but do not prove) the *converse* of this proposition.

6. If one angle of a triangle be equal to the other two, it is a right angle.

7. Show how to construct the circles respectively inscribed in and circumscribed about a given triangle.

CHEMISTRY.

1. Describe process of manufacture and physical properties of chlorine, bromine, and iodine, and mention their oxygen compounds.

2. Describe the composition and properties of malleable iron, cast-iron, and steel, and how they are manufactured.

3. By what tests are the following metals detected in their compounds: antimony, arsenic, nickel, cobalt?

4. Describe aluminium and magnesium, and how they are manufactured.

5. Give the formulæ for ammonium and its most common salts.

HISTORY.

1. Write a short history of New Zealand from its discovery to the year 1852.

2. Describe the present system of English government, distinguishing between the executive and legislative powers, and stating in whose hands they are placed. Describe also the process a Bill has to go through before it becomes law.

3. What statesmen administered the affairs of England during the first twenty years of Her Majesty's reign?

4. What is the origin of the terms Whig and Tory, to whom were they first applied, and why?

5. Give the names of the Monarchs of England during the last two hundred years who have not come to the Throne by right of primogeniture, stating briefly the reasons for their accession.

BOOK-KEEPING.

Journalize the following transactions:—

1. I purchased 100 ewes at 17s. 6d. each=£87 10s., from E. Stevens, for which I gave him my pro/note at 3 months, with 35s. added for interest.

2. I sold 50 ewes at 20s. each=£50, for cash, less £2 10s. discount, and paid amount to my bankers.

3. The remaining 50 ewes I had to paddock, for which I gave a cheque for £2; and presently the owner of the paddock bought the lot at 21s. each=£52 10s., giving me £25 in cash, and his bill at one month for £27 10s.

4. I discounted the bill at my bankers' at cost of 4s., and paid the cash to my credit.

5. Retired my pro/note to Mr. Stevens, and same day received notice from my bankers of the dishonour of the bill for £27 10s., which was charged to my account.

6. State amount of my balance at the bank.

7. Received from Calcutta consignment of 200 bales of woolpacks, valued at £4 7s. 6d. per bale, for returns to Messrs. Wilkin and Co.

8. Paid duty, landing charges, cartage, &c., on the bales, amounting to £125.

9. Sold 100 bales at £6 5s.=£625, and took a b/exchange on London at 60 d/st, which I indorsed and sent on to my friends, Messrs. Wilkin and Co.

10. Sold 50 bales at £5 12s. 6d.=£281 5s., for cash, less discount at 1½ per cent.

11. Sold 50 bales at £6 5s.=£312 10s., on 3 months terms, which I guarantee at a charge of 2½ per cent.=£7 16s. 3d.

12. Messrs. Wilkin and Co. agreed to give me 2½ per cent. commission on the sales I effected. What was the amount I charged them with?

13. Drew cheque for £   , and obtained draft on London, less exchange at 1¼ per cent. for £   in settlement of Messrs. Wilkin and Co.'s consignment.