

2. Multiply 15 miles 22 poles 2 feet by 365.
3. If the weight of a cubic foot of water is 1,000 oz., find the weight of a cubic inch of water in grains.
4. Find, by Practice, the value of 42a. 3r. 32p. at £6 12s. 6d. per acre.
5. A mechanic earns 12s. 6d. for every day he works: if he spends on an average 6s. 5d. on working-days, 17s. 8d. on holidays, and 1s. 3d. on Sundays, how much did he save in 1882, allowing for that year 8 holidays and 53 Sundays?
6. Simplify  $\frac{2\frac{3}{4} - 1\frac{1}{8} + \frac{7}{8}}{2\frac{3}{4} - \frac{1}{8} \text{ of } 3\frac{3}{8}}$ ; and express  $1\frac{1}{7}$  of half-a-crown as the fraction of 13s. 4d.
7. A reservoir is supplied by one pipe and emptied by another. The supply-pipe would fill it in 4 hours, and the waste-pipe empty it in 9 hours. If both are running together, how long will it take to fill the reservoir?
8. Define a decimal, and show how a decimal may be converted into an ordinary fraction, and an ordinary fraction into a decimal.
9. Find the value of  $\frac{2\cdot64}{105}$  of .0625 of a ton.
10. A consignment of 36 casks of sugar, each containing 3 cwt. 21 lb., was bought at £1.325 per cwt., and sold at 4.875d. per lb.: find the gain or loss.
11. If the air contained in a 400-gallon tank, at the pressure of  $14\frac{1}{2}$  lb. per square inch, were compressed into a cubical vessel whose side is 8 inches, what would be the resulting pressure, it being known that the pressure of a gas is inversely proportional to the space it occupies, and that 1 gallon = 277.274 cubic inches?
12. If 72 yd. of cloth,  $\frac{3}{4}$  yd. wide, be made of 32 lb. of wool, how much cloth,  $1\frac{1}{4}$  yd. wide, can be made of 120 lb. of wool?
13. Find the simple interest on £628 12s. 6d. from the 22nd January to the 15th May at 5 per cent. per annum.
14. How much water must be mixed with 80 gallons of spirit which cost 24s. a gallon, so that by selling the mixture at 22s. a gallon there may be a profit of 10 per cent.?

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CLASS E.—GEOGRAPHY.

*Time allowed: Three hours.*

1. Explain the meaning of the terms "latitude," "watershed," "river-basin," "estuary," "peninsula." Illustrate your answers by examples.
2. Explain why the days are longer in summer than in winter. In what parts of the world is the variation greatest?
3. Enumerate the principal lakes in New Zealand, and give the position of each.
4. Where in New Zealand are Greymouth, Mount Earnslaw, Mahia Peninsula, River Buller, Kaipara Harbour, Rangiora, Haast Pass, Castlepoint, Waipa River, Ross, Jackson's Bay, Mount Egmont?
5. Draw a map of Australia, and insert Cape Leeuwin, Brisbane, Swan River, Port Darwin, Wilson's Promontory, Maitland, Albany, Cape York, Port Jackson, Geelong.
6. Give a brief account of the river system of North America.
7. Give four of the principal towns of each of the following countries, and explain the position of each: Switzerland, Hindostan, Egypt, Canada, Spain, Persia.
8. What are the principal islands in or near the Baltic Sea, the Mediterranean Sea, the Gulf of Mexico?

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CLASS E.—ENGLISH HISTORY.

*Time allowed: Three hours.*

1. Explain how James VI. of Scotland came to be King of England.
2. What interval elapsed between the union of the Crowns and the union of the Parliaments; and which of these two events contributed most to cement the two countries? Specify the leading articles of the Treaty of Union.
3. What course of action led to the fall of the Stuart dynasty? How many attempts were made to restore it, and with what results?
4. Explain the nature and the object of the Act of Settlement.
5. When and with what design was the Triennial Act passed? How long did it remain in force, and by what Act was it repealed?
6. Give a brief account of the loss of our American colonies. Show how differently Britain deals with her colonies now.
7. Give a short narrative of the growth of our Indian Empire.
8. How was England led to establish the Australasian colonies?
9. What was the object of the Catholic Emancipation Act? What Act did it repeal? And what subsequent Act relieved another section of the community from similar disabilities?
10. Name the Prime Ministers of Victoria's reign, and any great measures or events with which their names may happen to be connected.
11. In what way did the following leave their mark on the history of their country: John Hampden, William Penn, Bacon, Newton, Wesley, Wilberforce, Watt, and Cobden?