

## OXFORD LOCAL EXAMINATIONS

### SCHOOL CERTIFICATE

MONDAY, JULY 11, 1949

TIME ALLOWED—1½ HOURS

#### Arithmetic

[Write ARITHMETIC at the head of each sheet of your answers.

All necessary work must be shown. No credit will be given for answers without sufficient work.]

*Algebraical methods may be used, but not mathematical tables.*

1. (i) Express  $\frac{7\frac{1}{5} - 2\frac{4}{7}}{6\frac{3}{4}}$  in its simplest form.

(ii) Find the value of  $0.1476 \times 69.5$  correct to four significant figures.

2. A motor-car is travelling at a steady speed of 145.6 miles an hour. Find, to the nearest tenth of a second, the time taken to cover one mile.

3. A gravel path 4 ft. wide runs round a lawn 57 ft. long and 49 ft. wide. Given that gravel costs 5s. 3d. per cubic yard, find the cost of the gravel required to cover the path to a depth of 3 in.

4. The marked price of an article gives a dealer a profit of 30 per cent. on his outlay. He allows 2½ per cent. discount off the marked price for cash payment. Find his net percentage profit on his outlay.

5. Find the rate per cent. per annum at which the simple interest on £140 for 3½ years is £15. 18s. 6d.

6. A square foot of a certain sheet of metal weighs 7 lb. Find, correct to five significant figures, the weight in kilogrammes of a square metre of the metal sheet. [Take 1 metre = 3.28 ft., 1 kg. = 2.205 lb.]

7. A clock, which gains steadily, pointed to 3 minutes past 10 on Monday morning when the correct time was 10 o'clock. At 10 p.m. on the same day the clock indicated 10.5. What was the correct time when the clock pointed to 8.30 the next morning? Give your answer to the nearest quarter of a minute.

8. The capital of a company was £75,000 in 1946. In that year part of the profits was used to provide a dividend of 5 per cent. on the capital, and the remainder, £1,000, was placed in the reserve fund. In 1947 the capital was increased to £90,000 and the profits were 10 per cent. more than in the previous year. How much could be placed in the reserve fund in 1947 if a dividend of 5 per cent. was again paid on the capital?