

## XVIII.—Page 55.

- (1.) .007916; .0001099989. (2.) 1199.365234375.  
 (3.) 59.0625. (4.) \$14591.66 $\frac{2}{3}$  eldest; \$4166.66 $\frac{2}{3}$  two others. (5.) Read 4.190476 instead of 4.1908476. 2 tons 2 cwt. 2 qrs. 11 $\frac{65}{108}$  lbs. (6.) .65706. (7.)  $\frac{100129}{102132}$ .  
 (8.) .0117203. (9.) Examined, 150; average, 250.  
 (10.) 61.22.

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(1.) If the work be denoted by 1. Then A and B do 1 in 20 days, or  $\frac{1}{20}$  in 1 day. B does 1 in 50 days, or  $\frac{1}{50}$  in 1 day. Hence A does  $\frac{1}{20} - \frac{1}{50} = \frac{3}{100}$  in one day, and  $1 \div \frac{3}{100} = 33\frac{1}{3}$  days, in which A could finish the the work by himself.

And B does  $\frac{1}{50}$  in 1 day, or in 20 days he does  $\frac{20}{50}$  or  $\frac{2}{5}$  of the work.

A does  $\frac{3}{100}$  in 1 day, or in 20 days he does  $\frac{20 \times 3}{100}$  or  $\frac{3}{5}$  of the work.

(2.) A and B do 1 in 6 days, and  $\frac{1}{6}$  in 1 day. B does  $\frac{1}{5}$  in 1 $\frac{1}{2}$  days, and  $\frac{2}{15}$  in 1 day. And A does  $\frac{1}{6} - \frac{2}{15} = \frac{1}{30}$ : and  $1 \div \frac{1}{30} = 30$  days,  $1 \div \frac{2}{15} = 7\frac{1}{2}$ .

That is, A does the work in 30 days, and B in 7 $\frac{1}{2}$  days.

(3.) A does 1 in 15 days, and  $\frac{1}{15}$  in 1 day. B does 1 in 18 days, and  $\frac{1}{18}$  in 1 day. Together they do  $\frac{1}{10}$  of the work.  $\frac{9}{10}$  remains to be done. Here B leaves, A continues for 3 days, and in that time does the  $\frac{3}{15}$  of the work. When C begins there remains of work  $\frac{9}{10} - \frac{3}{15} = \frac{1}{2}$ . Of this A does the  $\frac{4}{15}$  in 4 days, and C, therefore, must do the  $\frac{5}{30}$  in 4 days, or the whole in 24 days.