

IN THE HIGH SCHOOL ARITHMETIC

25. Measure = $(3\frac{1}{2} \times 5\frac{1}{2}) \div (\frac{3}{4} \times \frac{7}{8}) = 26\frac{4}{7}$.

26. A, B and C do $\frac{1}{4} + \frac{1}{10}$, or $\frac{7}{20}$ in 1 day. $\therefore$ A can do $\frac{7}{20} - \frac{1}{10}$, or $\frac{1}{4}$ in 1 day. $\therefore$ A and C do $\frac{1}{4} + \frac{1}{10}$, or $\frac{7}{20}$ in 1 day.

27. 1 rouble = 38.177 pence = $38.177 \times \frac{25.2215}{240}$ francs.

28. Discount for 100 days = $\$182.50 \times \frac{1}{100} \times \frac{100}{100} = \1.825 .
 $\therefore$ on \$179 the bank makes \$3.50 int. in 100 da.

29. Circumference = 22 ft. $\therefore$ radius = 3.5 ft. $\therefore$ area = 38.5 sq. ft.

30. Suppose it holds 30 pints and $\therefore$ contains 25 of wine and 5 of water. The second mixture contains 18 of wine and 12 of water. $\therefore$ 7 pints of wine were drawn from the 25 pints, or $\frac{7}{5}$ of the mixture.

31. Sup. 30c. the cost of tea and 16c. of coffee. $\therefore$ gain on coffee = \$44.80. Loss on tea = \$13.50. Net gain = \$31.30. $\therefore$ tea cost 60c. per lb.

32. \$2 is the com. on \$100. $\therefore$ rate = 2%.

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33. Cash cost = \$30. $\therefore$ cash S. P. = \$36. The int. on \$36 is \$1.20 in 10 mo.

34. 462 gal. = $\frac{30 \times 462 \times 8}{1728}$ cu. ft. Surface of base of cistern = $\frac{22}{7} \times \frac{7}{2} \times \frac{7}{2}$ sq. ft. $\therefore$ depth = $\frac{30 \times 462 \times 8}{1728} \div \left[\frac{22}{7} \times \frac{7}{2} \times \frac{7}{2} \right]$ ft.

35. The sheep at \$5 and \$6 will balance each other. A sheep at \$4 gains \$1, and one at \$8 loses \$2. $\therefore$ 5 sheep at \$4 will balance 3 sheep at \$8. $\therefore$ the numbers may be 5, 1, 1, 3, or 5, 2, 2, 3, &c.