

IN THE HIGH SCHOOL ARITHMETIC

of grass, and 464 oxen are kept 1 wk. by the grass on 8 ac. + 16 wks.' growth of grass.  $\therefore$  144 oxen are kept 1 wk. by 6 wks.' growth on 8 ac.  $\therefore$  24 oxen are kept 1 wk. by 1 wks.' growth on 8 ac., and 24 oxen are kept  $a$  wks. by  $a$  wks.' growth on 8 ac., and 45 oxen are kept  $a$  wks. by  $a$  wks.' growth on 15 ac.  $\therefore$   $(32 - 24)$  or 8 oxen are kept by 8 ac. of grass for 10 wks.  $\therefore$   $(70 - 45)$  or 25 oxen are kept by 15 ac. of grass for 6 wks.

93. \$2.40 is the int. for 1 year on the first year's int. \$2.496 is the int. for 1 year on the second year's int.  $\therefore$  \$.096 is the interest on \$2.40 for 1 year.  $\therefore$  the rate is 4%. \$2.40 is the int. on \$60.  $\therefore$  the first year's int. = \$60.  $\therefore$  the original sum was \$1800.

94. The sides are 45.5 rods and 58 rods. The diagonal is 72.5 rods.

95. The loss is  $\frac{1}{4}$  of cost.  $\therefore$  the discount fraction is  $\frac{1}{4}$ , or 25%. Hence the marked price was \$120.

96. Find its value 6 months ago, as on page 202, and find the amount of that value for 6 months.

97. Cash cost of the goods when sold is the P.W. of \$520.20 due in 3 mo., which is \$510.  $\therefore$  cash S.P. = \$561, which amounts to \$575.96 in 4 mo.

98. In 1 min. the no. of cu. ft. of water which flows is  $\frac{22}{7} \times 7 \times 7 \times 880 \div 144$ . Vol. of reservoir 1 in. in depth =  $187 \times 96 \times 9 \div 12$  cu.ft. The 2nd of these divided by the 1st is the required no. of min.

99. He sells  $388\frac{1}{2}$  yd. for the cost of  $\frac{177}{2} \times \frac{36}{5} \times \frac{5}{4}$  yd.  $\therefore$  he must sell the rem. for the cost of  $777 \times \frac{5}{4} - \frac{177}{2} \times \frac{36}{5} \times \frac{5}{4}$  yd. But he sells the rem. as  $\frac{177}{2} \times \frac{36}{5}$  yd.  $\therefore$  each yd. of the rem. is sold for the cost of  $1\frac{1}{2}\frac{36}{5}$  yd.  $\therefore$  he must mark it at  $\frac{36}{5}$  of 100% of cost.

100. By (a) the cost will be  $100\frac{1}{2}\%$  of \$5000 = \$5025.  
By (b) the cost will be  $\frac{100}{99\frac{1}{2}}$  of \$5000 = \$5025.1256.