

(b) \$820 would now pay the two years' rent.

6. A man invests \$6000 in 5% stock at 120; at the end of one year, having just received the yearly dividend, he sells at 121½. How much better off is he than if he had loaned his money at 5% per annum?

7. A starts to walk from P to Q at the rate of 4 miles an hour, and one hour afterwards B starts from P and overtakes A in 4 hours. Walking on, B arrives at Q 2 hours before A. Find the distance from P to Q.

7. B gains 4 miles in 4 hours, or 1 mile in 1 hour. A walks 3 hours longer than B, in which he walks 12 miles. ∴ B must walk for 12 hours altogether, or 60 miles.

8. (a) The sides of a triangle are 40, 45, 50 feet respectively. Find the length of the perpendicular from the vertex to the side 45 feet.

(b) A road runs round a circular pond; the outer circumference is 440 yards, and the

width of the road is 20 yards. Find the area of the pond.

8. (a) Area of $\triangle = \frac{1}{2} \sqrt{27.5 + 17.5 + 12.5 + 67.5}$
 $= 284.97 +$

∴ Length of perpendicular $= \frac{2 + 284.97}{45}$
 $= 12.66$ ft.

(b) Diameter of outer circle $= \frac{7}{22}$ of 440
 $= 140$ yards.

Diameter of inner circle $= 140 - 40 = 100$ yds.

9. A spherical shell, internal diameter 14 inches, is filled with water. Its contents are poured into a cylindrical vessel whose internal radius is 14 inches; find the depth of the water in the cylinder.

9. Cub. conts. of sphere $= \frac{4}{3}$ of $7^3 \times \frac{22}{7}$ c. in.

Area of base of cylinder $= 14^2 \times \frac{22}{7}$ q. in.

Dept. $= \frac{4}{3}$ of $7^3 \times \frac{22}{7} \div \left\{ (14)^2 \times \frac{22}{7} \right\} = 2 \frac{1}{3}$ in.

CONTEMPORARY LITERATURE.

The poetry of John Donne, by Edmund Gosse, is an article interesting to students of English literature in the *Littell's Living Age* for Nov. 18. "Sir John" is a good story of Indian life in the same issue.

The *Overland* for December will be a specially good number.

"The Esquimaux Maiden's Romance" by Mark Twain and Walter Besant's "American Notes" are the articles which receive the particular mark of the publishers of the *Cosmopolitan* this month. Some English forms of invitation by Adam Badeau is hardly the kind of thing one expects to see in a high class magazine. One of the very best things in the issue is "Dealing in Futures" by Alice W. Rollins.

The *Quiver* announces excellent material for 1894. In December number two serials are begun, one of which, "Garth Garrickson," is specially good. There is a beautiful coloured frontispiece entitled, "Leaving Home."

Brander Matthews is to tell the young about American Authors, in *St. Nicholas* for 1894.

Rudyard Kipling is to contribute a story to the Christmas number of the *Illustrated London News*, which promises to be of special excellence.

"A Study for Colonel Newcombe" is a reminiscent article on Thackeray by Canon Irvine in the November *Eclectic*. "Weariness" and a "Garden in Stone" are among other interesting papers.