MAY HAS THIRTY-ONE DAYS.

[1856.	Third
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Sp

11 SUND. 1

12 Mond. 1

11

1

11

13 Tuesd.

14 Wed.

15 Thur.

16 Friday 1

17 Satur. 1

18 SUND.

19 Mond. 1

20 Tuesd. 1

23 Friday 1

24 Satur. 1 25 SUND. 1

26 Mond. 1

27 Tuesd. | 28 Wed. |

30 Friday

31 Satur.

vertices of

opposite, s

sides of the Prop. 37

56°, and 4

PROB. St.

29 Thur.

21 Wed.

22 Thur.

1Thur.Ascension.2Friday (1) Duko of Wellington b. 1760.Moon near Jupiter.3Satur.Clocks introduced in 1368.	New Mo. First Que
4SUND. Ist Sunday after Ascension. MoonMoon near \mathfrak{P} Moon12734ench side ?5Mond. Napoleon died, 1821. Tuesd. 9FridayJamaica taken by England, 1655. Ice stationary at Quebee, 1836. Columbus's fourth Voyage. 10Moon near Mercury. 2712734ench side ?6Tuesd. 10Satur. Battle of Lodi, 1706. 12Moon near Mercury. 2712734preole about one of its 12710Satur. 10Battle of Lodi, 1706. 12Moon near Saturn. Mars South 9.1 even. 1212735sides, what will be the 12711SUND, 14Witä Sunday. Mond. 12Perceval assassinated, 1812. Moon acas of Regulus. Mars south, 8.45 eve. Mars south, 8.43 even. 12712736Phone. 33.—If a semi- 2716Friday Friday 21Tuesd. Mond. Bit Charles Lagot died, 1832. Dr. Paley died, 1805. 22Mars south, 8.45 eve. Mars south 8.30 even. 2412737Phone. 34.—If a seg- 2722Thur. Moon in furthest South. 24Saturn in Taurus. Sturn in Taurus.12737Phone. 35.—If a semi-<	O Full Mo O Full Mo D Perigee D Apogee Day Mo. Vent Marin A 1 10 13 10 13 10 15 10 25 10 31 11 Thur. 2 Friday 3 Satur. 4 SUND. 5 Mond. 6 Tuesd. 8 Thur. 9 Friday

ANSWERS TO THE PROBLEMS FOR 1855.

PROB. 27.—Area of a transverse section of the ring =0.12526953 (nearly = 1÷80); distance of the centre of gravity of that section from the base of it=1000 ÷24352=0.04106; to this add the radius of the ring=(7÷20)=.35, and we have .39106. Twice this =.78212, and then multiply by 3.1416 =2.4671, and this multiplied by the sectional area 0.12526953=0.03084 solid inches, Ans.

> Note.—This is worked by the Centrobarye Method, and the external surface is supposed to be convex of course, as all wedding rings are, we suppose. Most of our correspondents have worked this supposing it to have two flat surfaces.

PROB. 28.—Let the mean radius of the Earth=20887680 feet=a, and 5 miles=26,400 ft=b. 16 1-12=m. Then $\sqrt{(2am)}=25920.783$,=the velocity the ball must have, if discharged at the surface of the earth, with which velocity its centrifugal force just balances the centripetal. But gravity acts with *less* power above the surface, hence 25920.783 $\sqrt{(a \div a + b)}=25904.1936$ feet, Ans.

Note.—The velocity a body would acquire in falling (7912+10) miles is that which answers our purpose. But the action of gravity at the *commencement* of motion will be less than 16 1-12th per second. It will be=16 1-12(3956+3961)² = 16.0428-feet.

PROB. 29.—Let 4=a, b=2. Then $\sqrt{(a_3^3+b_3^3)^3}=8.35864$ feet Ans.

PROB. 30.-Let 100 rods=a feet, and 1=b, then $a^2 \div b=2722500$ feet=5155 miles, Ans.

Note.—This question requires the rectification of the line called the involute of a circle.

PROB. 31.—Ans. 59.

Note.—This may be worked by Indeterminate Analysis, or by the least common multiple.

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