

utations and Com-
e Trigonometry.—
&c. Solution of
e omissions as in
Marks, Dec: 100.

Algebraically ;
arks, March 100.

II; XIII; XIV.
II to § 265, and
§ 296-8 and 307
al attention to
and read over
and Variation;
Logarithms
reading over
arks, March, 100.

to XVI, omit-
arks, June, 100.

ensions (Tod-
§ 27, 37, 48;
ical examples
arks, June 100.

explained
to XXIX.
; June, 300.
ed notes)—
Proportion,
; June, 300.

Plane Trigonometry (Todhunter's, and lectures or notes to be printed)—Heights and distances, Chapter XV, § 239-241. Properties of triangles, Chapter XVI, omitting § 253-4. Inverse ratios without examples, Chapter XVIII, § 263. December.

Solution of spherical triangles without proofs; polar triangles; Napier's circular parts. June.

Mensuration (lectures or notes to be printed)—Construc-
tion of ratios as $\sqrt{2}$, $\sqrt{3}$, $\sqrt{5}$, $\frac{1}{\sqrt{7}}$, $\frac{\sqrt{3}}{2}$, $\sqrt{\frac{2}{3}}$, $\sin^2\theta$, $\tan^2\theta$,
 $\cot\frac{\pi}{8}$, &c., and combinations of these. Rectilineal and circular

areas and perimeters and combinations of these. Construction of radius of curvature of ellipse, from its value $-N \sec^2\psi$. Area of ellipse as the projection of a circle. Area of a parabola intercepted by any chord, proved geometrically. Polygonal approximation to the areas of curves. Simpson's rule. Weddle's approximation. Summation of shot piles. December.

Marks (*Trigonometry and Mensuration*), Dec., 100; June, 400.

Conics and Analytical Geometry (lectures or notes to be printed)—Rectilinear and polar co-ordinates. Distance between two points. Area of triangle. Equation to a line. Equation of the 1st degree. Principle of intersections. Equation to a circle (any rectangular axes). Intersections with a straight line, three cases. General definition (Todhunter's) of a parabola, ellipse, hyperbola. Sections of a right cone shewing foci and directrices. Equation to parabola; construction of any point on a parabola by drawing a tangent. Equality of inclinations of tangent to axis and radius vector. Sub-tangent bisected by the curve. Tangents meeting on the axis. Definition of diameter as the bisector of chords parallel to the tangent at its extremity. Geometrical proof that any straight line parallel to the axis is a diameter, that the tangents at the extremities of any chord meet on the diameter which bisects it, and that the portion of diameter thus intercepted is bisected by the curve. Geometrical proof of equation referred to diameter and tangent. The distance of any external point from the parabola measured parallel to the axis varies as the square of the distance along the tangent. Ellipse defined as the projection of a circle, as described by the trammel and as the locus of $r + r' = 2a$. Equation proved from the two former definitions. Geometrical proof from the latter definition that the tangent is equally inclined to the focal distances. Locus of foot of the perpendicular from focus on tangent. Statement of

the lengths ae , a , $\frac{a}{e}$. Conjugate diameters as the projections