$$P^{v} = 4 - 1 \times (2 - 3) = 5; \quad \frac{14 - 3}{5} = \frac{11}{5} = 2 + \frac{1}{5}; \quad P^{v} = 5, \quad \mu^{v} = 2, \quad R^{v} = 1.$$

$$P^{vI} = 9 - 2 \times (3 - 1) = 5; \quad \frac{14 - 1}{5} = \frac{13}{5} = 2 + \frac{3}{5}; \quad P^{vI} = 5, \quad \mu^{vI} = 2, \quad R^{vI} = 3.$$

$$P^{vII} = 5 - 2 \times (1 - 3) = 9; \quad \frac{14 - 3}{9} = \frac{11}{9} = 1 + \frac{2}{9}; \quad P^{vII} = 9, \quad \mu^{vII} = 1, \quad R^{vII} = 2.$$

$$P^{vII} = 5 - 1 \times (3 - 2) = 4; \quad \frac{14 - 2}{4} = \frac{12}{4} = 3 + \frac{0}{4}; \quad P^{vIII} = 4, \quad \mu^{vIII} = 3, \quad R^{vIII} = 0.$$

$$P^{IX} = 9 - 3 \times (2 - 0) = 3; \quad \frac{14 - 0}{3} = \frac{14}{3} = 4 + \frac{2}{3}; \quad P^{IX} = 3, \quad \mu^{IX} = 4, \quad R^{IX} = 2.$$

$$P^{X} = 4 - 4 \times (0 - 2) = 12; \quad \frac{14 - 2}{12} = \frac{12}{12} = 1 + \frac{0}{12}; \quad P^{X} = 12, \quad \mu^{X}, = 1, \quad R^{X} = 0.$$

$$P^{XI} = 3 - 1 \times (2 - 0) = 1; \quad \frac{14 - 0}{1} = \frac{14}{1} = 14 + \frac{0}{1}; \quad P^{XI} = 1, \quad \mu^{XI} = 14, \quad R^{XI} = 0.$$

HERE I stop, because  $P^{x_1} = P^{\circ} = 1$ . And the series of numbers sought is, 1, 4, 3, 1, 2, 4, 1, 3, 4, 1, 14.

On turning to page 378 of the English edition of EULER's Algebra, it will be found that the table there given consists of the two series of numbers, P°, P', P'', &c. and  $\mu$ ,  $\mu'$ ,  $\mu''$ ,  $\mu'''$ , &c.

This rule is the more worthy of notice, that it proceeds by certain definite arithmetical operations: whereas the method of M. De la Grange determines the numbers,  $\mu$ ,  $\mu'$ ,  $\mu''$ , &c. by appreciating the value of certain expressions to the nearest unit, or by a process that is in some measure tentative, and therefore not strictly analytical.

## SURGERY.

Mr Russel read an account of a fingular variety of Hernia which occurred to him while he was delivering clinical lectures in conjunction with Dr Brown and Mr Thomson. Mr Thomson diffected the parts with great care and accuracy, and discovered certain peculiarities, which makes the knowledge of this Vol. V.—P. III.

D variety

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variety a real addition to the pathology of the difease. It is a modification of Inguinal Hernia. But as the circumstances of difference are constant and essential, it may fairly be regarded as a distinct species. In the common cases of inguinal hernia, the viscera which are to form the protrusion enter the upper and internal orifice of the abdominal ring, along with the fpermatic cord, accompany the cord through the whole length of the passage, and come out along with it at the inferior and external orifice of the ring. Thus the hernia is formed by the dilatation of a natural passage. But in this new and hitherto undescribed variety, the viscera burst through the common parietes of the abdomen, exactly opposite to the lower and external orifice of the ring, where they come into contact with the spermatic cord, and descend along with it directly into the scrotum. This hernia, therefore, resembles a ventral hernia in its commencement, by beginning to protrude where there is no natural opening; and it refembles an inguinal hernia, by passing through the lower and external orifice of the abdominal ring, where the protrusion of the common inguinal hernia is completed. it is a hernia of a mixed nature, forming an intermediate species between a fimple and pure ventral hernia, and the common and perfect inguinal hernia.

ANOTHER effential circumstance respects the position of the hernia with regard to the course of the epigastric artery. In ordinary cases of inguinal hernia, the epigastric artery runs on the inside of the hernia, but in this variety it constantly runs on the outside. This leads to some important considerations in practice, though Mr Russel did not enter fully into the applications of the peculiarities, either to practical points, or to the explanation of various curious circumstances in the history of hernial swellings.