

Potenze ed espressioni

Es. pag. 458 n. 189, 191, 192. Es. pag. n. 468 n. 296 e 297.

$$189 \quad \left[\left(\frac{3}{2} \times \frac{8}{15} \right)^5 \right]^3 : \left[\left(\frac{5}{6} \times \frac{4}{3} \times \frac{9}{25} \right)^3 \right]^5 = \left[\frac{4}{5} : \frac{2}{5} \right]^{15} = 2^{15} \qquad \left(\frac{2}{3} \times \frac{5}{4} \right)^6 = \left(\frac{5}{6} \right)^6$$

$$191 \quad \left[\frac{5}{6} \times \frac{4}{15} \right]^6 : \left(\frac{2}{9} \right)^4 = \left(\frac{2}{9} \right)^6 : \left(\frac{2}{9} \right)^4 = \left(\frac{2}{9} \right)^2 \quad \left[\frac{8}{21} \times \frac{7}{2} \right]^{12} : \left[\frac{3}{5} \times \frac{20}{9} \right]^5 = \left(\frac{4}{3} \right)^{12} : \left(\frac{4}{3} \right)^5 = \left(\frac{4}{3} \right)^7$$

$$192 \quad \left\{ \left(\frac{5}{4} \right)^9 \times \left(\frac{2}{5} \right)^9 \right\} : \left[\frac{5}{6} \times \frac{3}{5} \right]^{15} = \left(\frac{1}{2} \right)^9 : \left[\frac{1}{2} \right]^{15} = \left(\frac{1}{2} \right)^4$$

$$\left\{ \left(\frac{3}{2} \right)^6 \times \left[\frac{3}{4} \right]^6 \right\}^2 : \left[\frac{3}{14} \times \frac{7}{5} \right]^{12} = \left(\frac{9}{8} \right)^{12} : \left[\frac{3}{10} \right]^{12} = \left(\frac{9}{8} \times \frac{10}{3} \right)^{12} = \left(\frac{15}{4} \right)^{12}$$

$$296 \quad \left(\frac{2}{3} \right)^3 : \frac{7}{9} = \frac{8}{27} \times \frac{9}{7} = \frac{8}{21}$$

$$\left(\frac{3}{2} \right)^2 - \left(\frac{4-1}{6} \right)^2 = \frac{9}{4} - \left(\frac{3}{6} \right)^2 = \frac{9}{4} - \left(\frac{1}{2} \right)^2 = \frac{9}{4} - \frac{1}{4} = \frac{8}{4} = 2$$

$$297 \quad \left(\frac{5-2}{20} \right)^2 : \left(\frac{5-2}{8} \right)^2 - \left(\frac{15-7}{40} \right)^2 = \left(\frac{3}{20} \times \frac{8}{3} \right)^2 - \left(\frac{8}{40} \right)^2 = \left(\frac{2}{5} \right)^2 - \left(\frac{1}{5} \right)^2 = \frac{4}{25} - \frac{1}{25} = \frac{3}{25}$$