1 **COMPLETA**

Semplifica la seguente espressione:

$$\left[\left(\frac{4}{5}-\frac{9}{10}+\frac{5}{3}\right):\left(-\frac{4}{15}\right)\right]^2\cdot\left(-\frac{3}{47}\right)^2+\frac{1}{4}-2.$$

$$\left[\left(\frac{4}{5}-\frac{9}{10}+\frac{5}{3}\right):\left(-\frac{4}{15}\right)\right]^2\cdot\left(-\frac{3}{47}\right)^2+\frac{1}{4}-2=$$

$$=\left[\left(\frac{24-\ldots+\ldots}{30}\right):\left(-\frac{4}{15}\right)\right]^2\cdot\left(-\frac{3}{47}\right)^2+\frac{1}{4}-2=$$ Esegui le operazioni dentro le parentesi tonde.

$$=\left[\left(\frac{\ldots}{30}\right)\cdot\left(-\frac{15}{4}\right)\right]^2\cdot\left(-\frac{3}{47}\right)^2+\frac{1}{4}-2=$$ Trasforma la divisione in moltiplicazione.

$$=\left(\frac{\ldots}{8}\right)^2\cdot\left(-\frac{3}{47}\right)^2+\frac{1}{4}-2=$$ Esegui la moltiplicazione e applica la proprietà del prodotto di potenze con lo stesso esponente.

$$=\left(\frac{\ldots}{\ldots}\right)^2+\frac{1}{4}-2=$$ Calcola la potenza ed esegui le operazioni.

$$=\frac{\ldots}{64}+\frac{1}{4}-2=\frac{\ldots+16-\ldots}{64}=-\frac{103}{64}.$$

2 **PROVA TU**

Semplifica la seguente espressione:

$$\left[\left(5+\frac{2}{3}\right):\left(9-\frac{1}{2}\right)\right]^2\cdot\left(\frac{5}{2}\right)^2-\left[\left(\frac{3}{2}\right)^4:\left(\frac{3}{2}\right)^2\right]+\frac{9}{4}.$$

$$\left[\left(5+\frac{2}{3}\right):\left(9-\frac{1}{2}\right)\right]^2\cdot\left(\frac{5}{2}\right)^2-\left[\left(\frac{3}{2}\right)^4:\left(\frac{3}{2}\right)^2\right]+\frac{9}{4}=$$

$$=\left[\left(\frac{\ldots+2}{3}\right):\left(\frac{\ldots-1}{2}\right)\right]^2\cdot\left(\frac{5}{2}\right)^2-\left(\frac{3}{2}\right)^{\ldots}+\frac{9}{4}=$$

$$=\left[\frac{\ldots}{3}:\frac{\ldots}{2}\right]^2\cdot\left(\frac{5}{2}\right)^2-\frac{9}{4}+\frac{9}{4}=$$

$$=\left[\frac{\ldots}{3}\cdot\frac{2}{17}\right]^2\cdot\left(\frac{5}{2}\right)^2=$$

$$=\left[\frac{\ldots}{3}\right]^2\cdot\left(\frac{5}{2}\right)^2=$$

$$=\left(\frac{\ldots}{3}\cdot\frac{5}{2}\right)^2=$$

$$=\left(\frac{\ldots}{3}\right)^2=\ldots$$

Semplifica le seguenti espressioni applicando le proprietà delle potenze.

3 $1+\left[\left(\frac{3}{2}\right)^3\right]^2:\left\{\left[\left(\frac{3}{2}\right)^2\right]^1:\left(-1+\frac{1}{3}\right)^4\right\}$ [2]

4 $\left[\left(\frac{5}{3}\right)^5\cdot\left(\frac{5}{3}\right)^2\right]^2:\left[\left(1+\frac{2}{3}\right)^2\right]^6-1$ $\left[\frac{16}{9}\right]$

5 $\left[\left(-\frac{1}{2}+\frac{3}{4}-\frac{1}{3}\right)^2:\left(-1+\frac{3}{4}\right)^2\right]$ $\left[\frac{1}{9}\right]$

6 $\left\{\left[\frac{1}{5}:\left(1-\frac{3}{5}\right)^2-\frac{1}{2}\right]^3:\left(\frac{3}{4}\right)^3\right\}$ [1]

7 $\left[\left(1-\frac{1}{6}\right)^2\cdot\left(\frac{5}{6}\right)^3:\left(\frac{13}{12}-\frac{1}{4}\right)^3\right]$ $\left[\frac{25}{36}\right]$

8 $\left[\left(-\frac{1}{2}-\frac{1}{4}\right)^2:\left(-1+\frac{1}{2}\right)^2\right]-2$ $\left[\frac{1}{4}\right]$

9 $\left[\left(\frac{1}{5}-\frac{1}{2}\right)^3:\left(\frac{3}{8}-\frac{5}{4}+\frac{1}{2}\right)^3\right]:\left(1-\frac{1}{5}\right)$ $\left[\frac{16}{25}\right]$

10 $\left(\frac{2}{3}\right)^2:\left[\left(\frac{4}{3}\right)^3:\left(\frac{4}{3}\right)\right]+\left(-\frac{3}{4}\right)^3:\left[\left(-\frac{3}{4}\right)^3\right]^2:\left(-1+\frac{1}{4}\right)^{-4}$ $\left[-\frac{1}{2}\right]$

11 $\left[\left(\frac{4}{5}-2\right)^4\cdot\left(-\frac{3}{5}\right)^{-4}\right]:\left[(-2)^{-4}:\left(-\frac{1}{2}\right)^3\right]^{-3}+1$ [−1]