

DC Math (39:02)

Evaluate the following negative exponents.

$$10^{-3}$$

$$2^{-4}$$

Evaluate the following fractional exponents.

$$81^{1/2}$$

$$64^{1/3}$$

Evaluate the expression $2+4\cdot 8$

Evaluate the expression $(2+4)\cdot 8$

Identify the order of operations using the acronym PEMDAS.

Evaluate the expression $\frac{200}{200+400} \cdot 12$

Illustrate the means of entering the above expression into the TI89 using a single line.

Illustrate the means of entering the above expression into the TI89 using previous results.

Evaluate the expression $\frac{330\cdot 470}{330+470}$ using previous results.

Evaluate the following expressions using the order of operations.

① $2\cdot 5^2 - 3$ ⑦ $100 - 50 / 5 \cdot 10$

② $2 \cdot (5^2 - 3)$ ⑧ $(100 - 50) / 5 \cdot 10$

③ $2 \cdot 5^{2-3}$ ⑨ $100 - 50 / (5 \cdot 10)$

④ $(2 \cdot 5)^2 - 3$ ⑩ $(100 - 50) / (5 \cdot 10)$

⑤ $24 / 2 \cdot 6$ ⑪ $27^{1-2.5/15}$

⑥ $\frac{24}{2 \cdot 6}$ ⑫ $\sqrt[3]{128}$

Evaluate the expression $I = \frac{V}{R}$ given $R = 1.2\text{k}\Omega$ and $V = 17.1\text{V}$. Express the answer using proper engineering format rounded to the tenths place.

Evaluate these expressions. Express the answer using proper engineering format rounded to the tenths place.

$$\textcircled{1} V = IR \quad (V)$$

$$I = 407.6 \text{ mA}$$

$$R = 171 \Omega$$

$$\textcircled{2} R = \frac{V}{I} \quad (\Omega)$$

$$V = 120 \text{ V}$$

$$I = 30 \text{ mA}$$

$$\textcircled{3} P = V \cdot I \quad (W)$$

$$V = 690 \text{ V}$$

$$I = 24 \text{ A}$$

$$\textcircled{4} P = \frac{V^2}{R} \quad (W)$$

$$V = 28.3 \text{ V}$$

$$R = 4.3 \text{ k}\Omega$$

$$\textcircled{5} P = I^2 R \quad (W)$$

$$I = 25.7 \text{ mA}$$

$$R = 1.2 \text{ k}\Omega$$

$$\textcircled{6} V = \sqrt{P \cdot R} \quad (V)$$

$$P = 500 \text{ W}$$

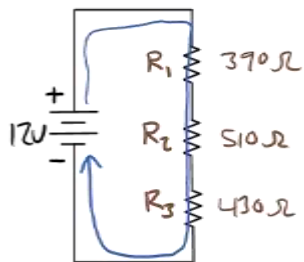
$$R = 620 \Omega$$

$$\textcircled{7} I = \sqrt{\frac{P}{R}} \quad (A)$$

$$P = 1 \text{ kW}$$

$$R = 50 \Omega$$

Compare and contrast the results obtained using previous results and rounded approximations for the sequence of calculations illustrated for this circuit.



Evaluate the following expressions. Round answers to the tenths place.

$$8/3$$

$$18/7$$

$$8/3 + 18/7$$