

Bellwork: Algebra

1. Write down your homework for the night in your planner.
2. Take out your work from Thursday and Friday and be ready to check it.
3. You need your composition book, your list of perfect squares from yesterday, and a calculator. If you borrow one of mine, take the calculator with your seat number on it.
4. Answer the following question on your bellwork in the TUESDAY box:

$$\begin{aligned} \left(x^{\frac{1}{4}}\right)^{\frac{2}{5}} &= \sqrt[\square]{\square^{\square}} \\ x^{\frac{2}{20}} &= 20\sqrt{x^2} \\ x^{\frac{1}{10}} &= 10\sqrt{x^1} \end{aligned}$$

Questions from book work?

$$\sqrt{12}$$

$$\sqrt{4} \sqrt{3}$$

$$2\sqrt{3}$$

$$\sqrt{27}$$

$$\sqrt{9} \sqrt{3}$$

$$3\sqrt{3}$$

$$\sqrt{50}$$

$$\sqrt{25} \sqrt{2}$$

$$5\sqrt{2}$$

$$\sqrt{32}$$

$$\sqrt{16} \sqrt{2}$$

$$4\sqrt{2}$$

$$\sqrt{200}$$

$$\sqrt{100} \sqrt{2}$$
$$10\sqrt{2}$$

$$\sqrt{175}$$

$$\sqrt{25} \sqrt{7}$$
$$5\sqrt{7}$$

$$\sqrt{1200}$$

$$\sqrt{400} \sqrt{3}$$
$$20\sqrt{3}$$

$$\sqrt{675}$$

$$\sqrt{225} \sqrt{3}$$
$$15\sqrt{3}$$

$$\sqrt{x^2} \rightarrow x^{2/2} = x$$

$$\sqrt{x^3} = \sqrt{x^2} \sqrt{x} = x \sqrt{x}$$

$$\sqrt{x^4} \rightarrow x^{4/2} = x^2$$

$$\sqrt{x^5} = \sqrt{x^4} \sqrt{x} = x^2 \sqrt{x}$$

$$\sqrt{x^6} \rightarrow x^{6/2} = x^3$$

$$\sqrt{x^2 y^8}$$

$$xy^4$$

$$\sqrt{x^3 y^6 z}$$

$$\sqrt{x^2 y^6} \sqrt{xz}$$

$$xy^3 \sqrt{xz}$$

$$\sqrt{x^4 y^5}$$

$$\sqrt{xy^4 z}$$

$$\sqrt{x^7 y^5}$$

$$\sqrt{xy^9}$$

$$\sqrt{x^6 y^4} \sqrt{xy}$$

$$x^3 y^2 \sqrt{xy}$$

$$\sqrt{40a^2b^8}$$

$$\sqrt{18x^3y^4}$$

A handwritten prime factorization diagram for the expression $18x^3y^4$. It consists of two rectangular boxes. The top box contains the factors $9x^2y^4$ and $\sqrt{2x}$. The bottom box contains the factors $3xy^2$ and $\sqrt{2x}$. Lines connect the top box to the top of the radical symbol in the expression above, and the bottom box to the bottom of the radical symbol.

$$\sqrt{90a^2b}$$

$$\sqrt{28x^8y^9}$$

$$\sqrt{2x} \cdot \sqrt{10x^3y^5}$$

$$\sqrt{6x^4y^4} \cdot \sqrt{20x^{10}y^5}$$

$$\sqrt{72}$$

$$\sqrt{48n^4}$$

$$\sqrt{63m^4}$$

$$\sqrt{28}$$

$$\sqrt{27p}$$

$$\sqrt{28x}$$

$$\sqrt{175}$$

$$\sqrt{28b^2}$$

$$\sqrt{12n^2}$$