$(-32)^{-\frac{2}{5}}$

$\frac{1}{(\sqrt[5]{-32})^2}$

$\frac{1}{(-2)^2}$

$\frac{1}{4}$

Clicker

$-16^{-\frac{3}{4}}$

$-\frac{1}{16^{3/4}}$

$-\frac{1}{8}$

$-\frac{1}{(\sqrt[4]{16})^3}$

$-\frac{1}{2^3}$

$-\frac{1}{8}$

12.2 Day 2

$$3^5 \cdot 3^7 = 3^{12}$$

$$3^{\frac{1}{5}} \cdot 3^{\frac{3}{5}} = 3^{\frac{4}{5}}$$

$$3^{\frac{1}{2}} \cdot 3^{\frac{1}{3}}$$

$$\frac{3}{3}\frac{1}{2} + \frac{1}{3}\frac{2}{2}$$

$$3 \rightarrow 3^{\frac{5}{6}}$$

$$\left(x^{2}\right)^{5} = x^{10}$$

$$\left(x^{\frac{1}{2}}\right)^{\frac{2}{3}} = x^{\frac{1}{3}}$$

$$\frac{x^{\frac{1}{4}}}{x^{\frac{2}{5}}}$$

$x^{\frac{1}{4}} \cdot x^{\frac{2}{5}}$

$x^{\frac{5}{20}} \cdot x^{\frac{8}{20}}$

$x^{\frac{13}{20}}$

$x^{-\frac{13}{20}} \rightarrow \frac{1}{x^{\frac{13}{20}}}$

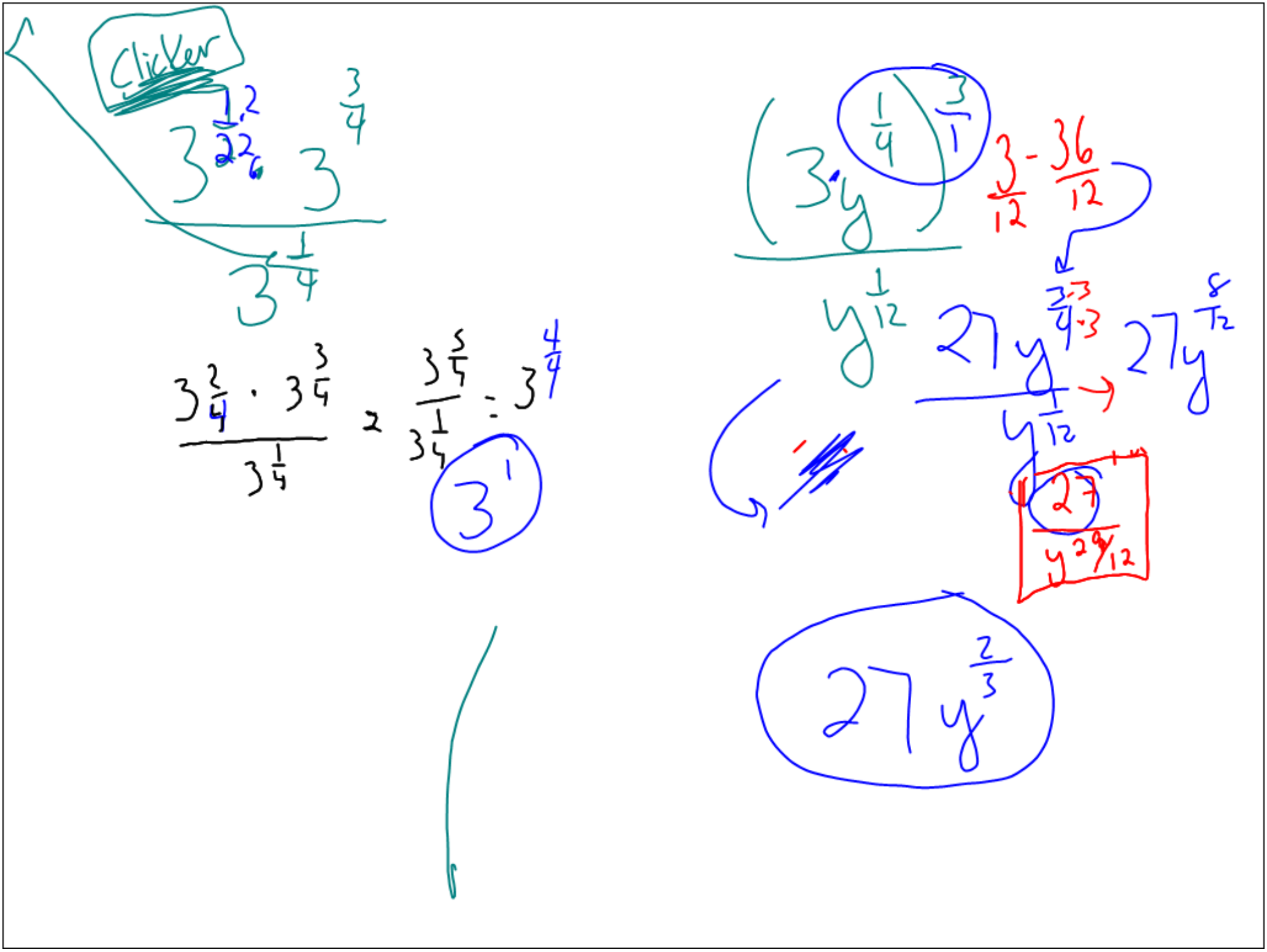
Simplify

$2x^{\frac{1}{4}} \cdot x^{\frac{4}{4}}$

$\frac{1}{4} \cdot \frac{4}{1} = \frac{4}{4} = 1$

$2x^1 = 2x$

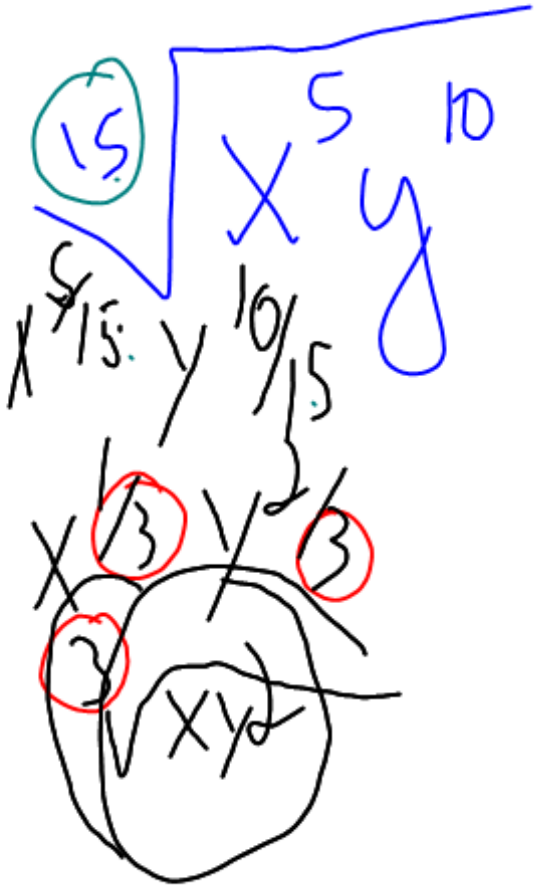
$16x$

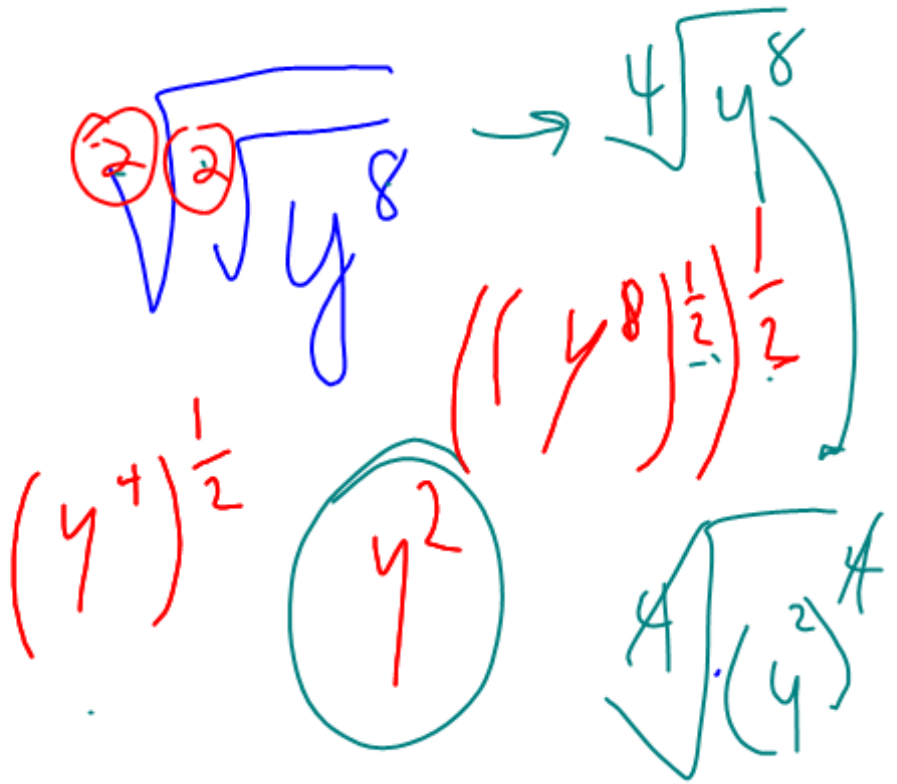

Clicker
$3^{\frac{1}{2}\cdot\frac{2}{6}}$ $3^{\frac{3}{4}}$
$3^{\frac{1}{4}}$
$\frac{3^{\frac{2}{4}}\cdot 3^{\frac{3}{4}}}{3^{\frac{1}{4}}} = \frac{3^{\frac{5}{4}}}{3^{\frac{1}{4}}} = 3^{\frac{4}{4}}$
3^1
$(3^y)^{\frac{3}{1}}$
$\frac{1}{4}$
$y^{\frac{1}{12}}$
$\frac{3}{12} - \frac{36}{12}$
$\frac{3-3}{4-3}$
$27y^{\frac{8}{12}}$
$\frac{27y}{y^{\frac{1}{12}}}$
$\frac{27}{y^{\frac{2}{3}}}$
$27y^{\frac{2}{3}}$

$\sqrt[2]{\sqrt[2]{x}} \rightarrow \left(x^{\frac{1}{2}}\right)^{\frac{1}{2}} = x^{\frac{1}{4}} = \sqrt[4]{x}$

$\sqrt[3]{\sqrt[4]{y}} \rightarrow \left(y^{\frac{1}{4}}\right)^{\frac{1}{3}} \rightarrow y^{\frac{1}{12}} \rightarrow \sqrt[12]{y}$

$$\sqrt[4]{y^2} = y^{\frac{2}{4}} = y^{\frac{1}{2}} = \sqrt{y}$$


15
x 5 y 10
x 5/15 y 10/15
x 1/3 y 2/3
3
xy2


2 2 y 8
4 y 8
(y 8)1/2 1/2
(y 4)1/2
y 2
4 (y 2) 4

$\sqrt{x} \cdot \sqrt[3]{x^2}$

$\frac{1}{2} \cdot 3$ $\quad$ $\frac{2}{3} \cdot 2$

$x^{\frac{3}{6}} \cdot x^{\frac{4}{6}}$

$x^{\frac{7}{6}}$

$\sqrt[6]{x^7}$

$x^2 \cdot x^3 = x^5$

$xx \cdot xxx$

Simplify

$$\frac{\sqrt[3]{y^2}}{\sqrt[6]{y}} \qquad \frac{y^{\frac{2\cdot 2}{3\cdot 2}}}{y^{\frac{1}{6}}}$$

$$y^{\frac{4}{6}} - y^{\frac{1}{6}} = y^{\frac{3}{6}}$$

$$y^{\frac{3}{6}} = y^{\frac{1}{2}} \qquad \sqrt{y}$$

$$\sqrt[3]{y} \quad \sqrt[3]{y}$$

$$\sqrt[12]{4\,x^3\,y^5} \qquad \sqrt[12]{x^3\,y^5\,y^{1/4}}$$

$$\sqrt[12]{x^{3}\,y^{5}\,y^{1/4}}$$

$$\sqrt[12]{x^{3/4}\,y^{5/4}}$$

$$x^{\frac{36}{9}}\,y^{60/4}$$

$$x^9\,y^{15}$$

$$\frac{\sqrt[4]{a^2b^3}}{\sqrt{ab}} \rightarrow a^{\frac{2}{4}}b^{\frac{3}{4}} \cdot a^{-\frac{1}{2}}b^{-\frac{1\cdot 2}{2\cdot 2}} = b^{\frac{1}{4}} = \sqrt[4]{b}$$