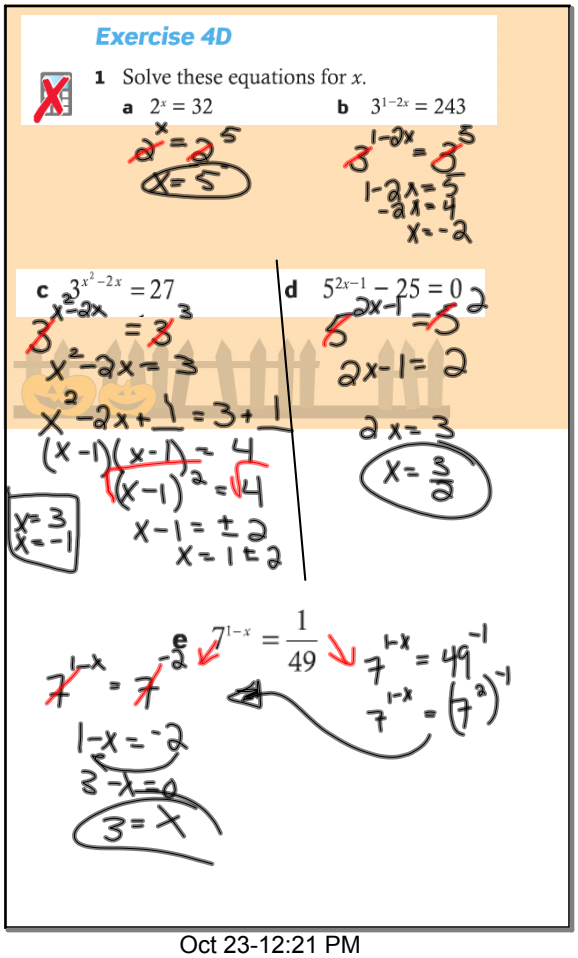

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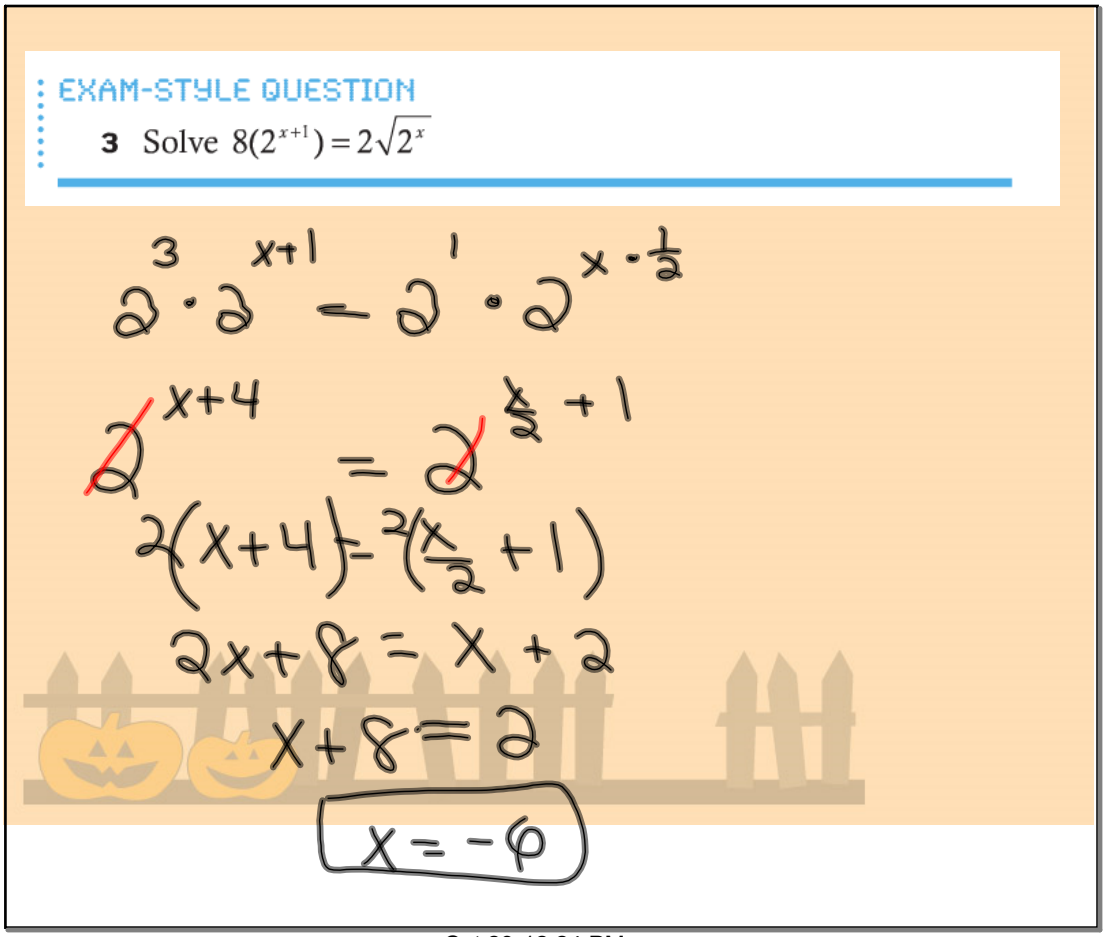

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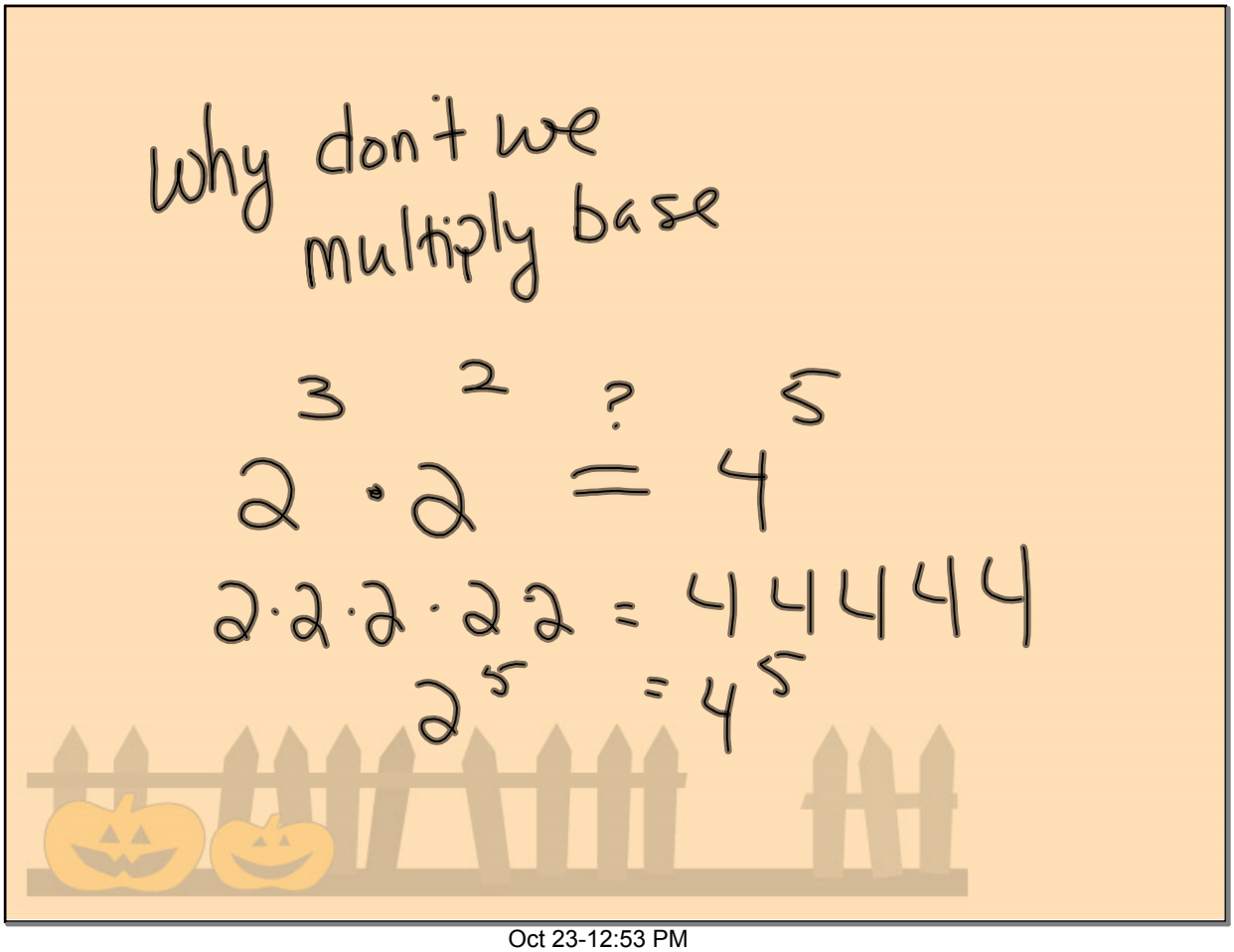

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Solve $3x^{-\frac{3}{5}} = 24$

Answer

$3x^{-\frac{3}{5}} = 24$ — *Divide both sides by 3.*

$x^{-\frac{3}{5}} = 8$

$\left(x^{\frac{-3}{5}}\right)^{\frac{-5}{3}} = 8^{-\frac{5}{3}}$ — *Multiply the exponent by its reciprocal since* $-\frac{a}{b} \times -\frac{b}{a} = 1$

$x = (2^3)^{-\frac{5}{3}}$ — *Replace 8 with* 2^3.

$x = 2^{-5}$

$x = \frac{1}{32}$

$\frac{3}{5} \cdot -1 \cdot 5$

$-1 \cdot 5$

2

5

2^{-5}

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ex) $\left(x^{\frac{1}{3}}\right)^3 = (5)^3$

$x = 125$

ex) $\left(x^{-\frac{2}{3}}\right)^{-\frac{3}{2}} = \left(\frac{1}{4}\right)^{-\frac{3}{2}}$

$\left(\frac{1}{4}\right)^{-1 \cdot -\frac{1}{2} \cdot 3}$

$4^{\frac{1}{2} \cdot 3}$

2^3

$x = 8$

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2 Solve these equations for x.

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

$x = 8$

b $5x^{\frac{1}{2}} = 125$

$\frac{5}{5} \quad \frac{125}{5}$

$\left(x^{\frac{1}{2}}\right)^2 = (25)^2$

$x = 625$

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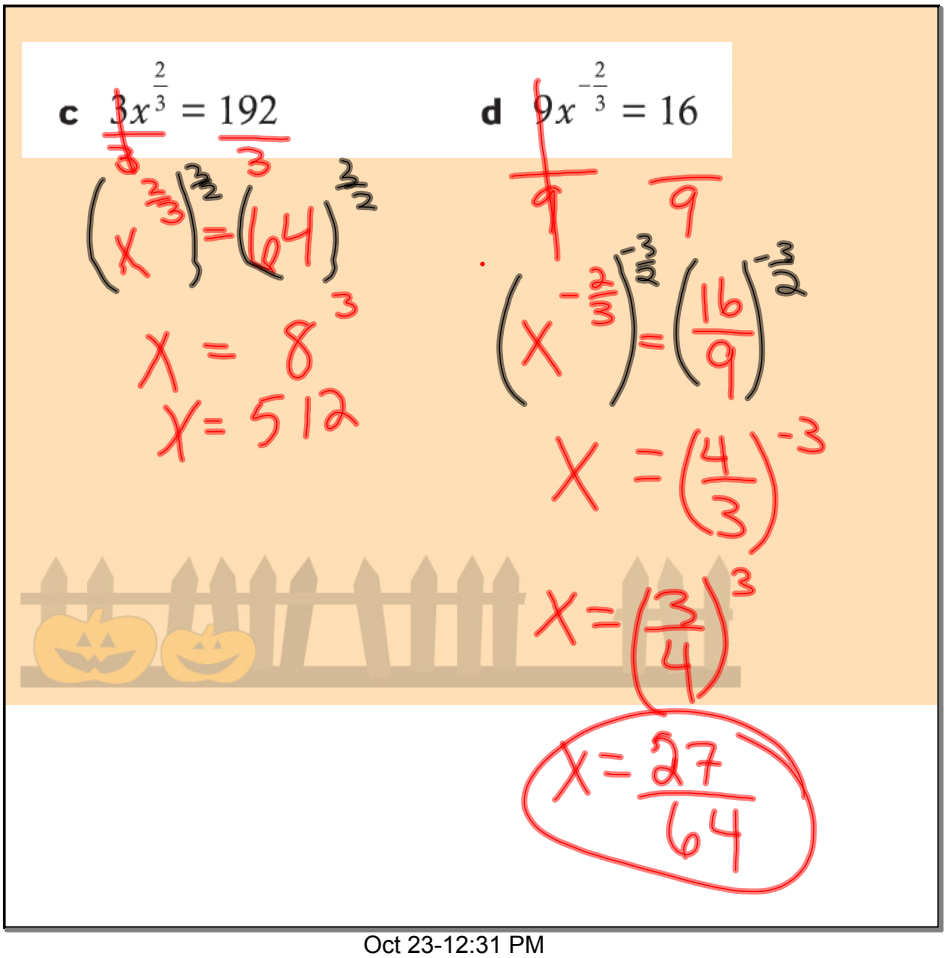

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