

November 28, 2017

#15)  $\frac{1}{5k^2+2k} - \frac{b}{5k+2} = \frac{b}{5k^2+2k}$

LCD:  $k(5k+2)$

$$\left[ \frac{k(5k+2)}{1} \cdot \frac{1}{k(5k+2)} \right] - \left[ \frac{k(5k+2)}{1} \cdot \frac{b}{5k+2} \right] = \left[ \frac{k(5k+2)}{1} \cdot \frac{b}{k(5k+2)} \right]$$

$$1 - 6k = b$$

$$-1 \quad -1$$

$$\frac{-6k}{-6} = \frac{b-1}{-6}$$

$$k = -\frac{b-1}{6}$$

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$k = -\frac{b-1}{6}$

$$\frac{1}{5\left(-\frac{b-1}{6}\right)^2 + 2\left(-\frac{b-1}{6}\right)} - \frac{b}{5\left(-\frac{b-1}{6}\right) + 2} = \frac{b}{5\left(-\frac{b-1}{6}\right)^2 + 2\left(-\frac{b-1}{6}\right)}$$

$$\frac{1}{5\left(\frac{b^2-2b+1}{36}\right) - \frac{b-1}{3}} - \frac{b}{-\frac{5b-5}{6} + \frac{2}{1}} = \frac{b}{5\left(\frac{b^2-2b+1}{36}\right) - \frac{b-1}{3}}$$

$$\frac{1}{\frac{5b^2-10b+5}{36} - \frac{b-1}{3}} - \frac{b}{\frac{-25+12}{6} + \frac{2}{1}} = \frac{b}{5\left(\frac{b^2-2b+1}{36}\right) - \frac{b-1}{3}}$$

$$\frac{1}{\frac{5b^2-10b+5-12b+4}{36}} - \frac{b}{\frac{-25+12}{6} + \frac{2}{1}} = \frac{b}{5\left(\frac{b^2-2b+1}{36}\right) - \frac{b-1}{3}}$$

$$\frac{1}{\frac{5b^2-22b+9}{36}} - \frac{b}{\frac{-13}{6}} = \frac{b}{5\left(\frac{b^2-2b+1}{36}\right) - \frac{b-1}{3}}$$

$$\frac{1}{\frac{5b^2-22b+9}{36}} \cdot \left[ \frac{36}{1} \cdot \frac{6}{13} \right] = \frac{b}{5\left(\frac{b^2-2b+1}{36}\right) - \frac{b-1}{3}} \cdot \left[ \frac{36}{1} \cdot \frac{6}{13} \right]$$

$$\frac{36}{65} + \frac{36}{13} = \frac{216}{65}$$

$$\frac{36+180}{65} = \frac{216}{65}$$

$$\frac{216}{65} = \frac{216}{65} \checkmark \text{ (smiley face)}$$

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Complete Solving fractions eg.

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Chapter 8

8.1 → Radicals

Index →  $n$

$\sqrt[n]{a}$  where  $n$  is exponent and  $a$  is Radicand

$= a^{\frac{1}{n}}$  where  $a$  is Base and  $n$  is exponent

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$$7^{\frac{2}{2}} = 7 \cdot 7 = 49$$

$$(-7)^{\frac{2}{2}} = (-7) \cdot (-7) = 49$$

$$+ \sqrt[2]{49} = 49^{\frac{1}{2}} = 7$$

$$- \sqrt[2]{49} = (-1) \cdot 49^{\frac{1}{2}} = (-1) \cdot 7 = -7$$

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