

MY WEBSITE

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Reminder Texts/Emails

Text @chspre10 to (902)708-0495

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Rationalizing Radicals: can't leave radical in denominator

$$\frac{2}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} = \frac{2\sqrt{3}}{3}$$

- multiply by some version of 1

conjugate: reverse the sign between the two terms

$$\frac{1}{2+\sqrt{5}} \cdot \frac{2-\sqrt{5}}{2-\sqrt{5}} = \frac{2-\sqrt{5}}{4-5} = \frac{2-\sqrt{5}}{-1} = \frac{-1(2-\sqrt{5})}{1} = -2+\sqrt{5}$$

Express with integer denominator:

(a) $\frac{-\sqrt{5}}{2-\sqrt{2}} - \frac{3+\sqrt{5}}{2-\sqrt{2}}$ *already a common denominator*

$$\frac{-\sqrt{5} - (3 + \sqrt{5})}{2 - \sqrt{2}}$$

$$= \frac{-\sqrt{5} - 3 - \sqrt{5}}{2 - \sqrt{2}}$$

$$= \frac{-2\sqrt{5} - 3}{2 - \sqrt{2}}$$

$$\frac{-2\sqrt{5} - 3}{2 - \sqrt{2}} \cdot \frac{2 + \sqrt{2}}{2 + \sqrt{2}}$$
$$= \frac{-4\sqrt{5} - 2\sqrt{10} - 6 - 3\sqrt{2}}{4 - 2}$$

$$= \frac{-4\sqrt{5} - 2\sqrt{10} - 6 - 3\sqrt{2}}{2}$$

$$(b) \frac{1 + \frac{1}{\sqrt{3}}}{1 - \frac{1}{\sqrt{3}}} = \frac{1 + \frac{1}{\sqrt{3}} + \frac{1}{\sqrt{3}} + \frac{1}{3}}{1 - \frac{1}{3}}$$

$$\frac{1 + \frac{1}{\sqrt{3}} + \frac{1}{\sqrt{3}} + \frac{1}{3}}{\omega/\omega - \omega/\omega} = \frac{1 + \frac{1}{\sqrt{3}} \frac{\omega}{\omega} + \frac{1}{\sqrt{3}} \frac{\omega}{\omega} + \frac{1}{3}}{2/3}$$

$$\frac{1 + \frac{\omega}{\sqrt{3}} + \frac{\omega}{\sqrt{3}} + \frac{1}{3}}{2/3} = \frac{\omega/\omega + \frac{\omega}{\sqrt{3}} + \frac{\omega}{\sqrt{3}} + \frac{1}{3}}{2/3} = \frac{4 + 2\sqrt{3}}{3} = \frac{4 + 2\sqrt{3}}{3} \cdot \frac{2/3}{2/3}$$

$$\frac{4 + 2\sqrt{3}}{2} = 2 + \sqrt{3}$$

$$\frac{1 + \frac{1}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}}}{1 - \frac{1}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}}} = \frac{1 + \frac{\sqrt{3}}{3}}{1 - \frac{\sqrt{3}}{3}} = \frac{\frac{3}{3} + \frac{\sqrt{3}}{3}}{\frac{3}{3} - \frac{\sqrt{3}}{3}} = \frac{\frac{3 + \sqrt{3}}{3}}{\frac{3 - \sqrt{3}}{3}}$$

$$\frac{\frac{3 + \sqrt{3}}{3}}{\frac{3 - \sqrt{3}}{3}} = \frac{3 + \sqrt{3}}{3 - \sqrt{3}} \cdot \frac{3 + \sqrt{3}}{3 + \sqrt{3}} = \frac{9 + 3\sqrt{3} + 3\sqrt{3} + 3}{9 - 3} = \frac{12 + 6\sqrt{3}}{6} = 2 + \sqrt{3}$$

$$\sqrt{\frac{3+2\sqrt{2}}{3-2\sqrt{2}} \cdot \frac{3+2\sqrt{2}}{3+2\sqrt{2}}}$$

$$= \sqrt{\frac{(3+2\sqrt{2})^2}{9-8}}$$

$$= \sqrt{\frac{(3+2\sqrt{2})^2}{1}}$$

$$= \sqrt{(3+2\sqrt{2})^2} = 3+2\sqrt{2}$$

HW: review last nights HW and
sheet from today

prepare for probe on 3A, B, C for
tuesday