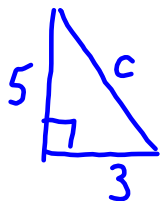


HOMWORK QUESTIONS???

(page 211, #3 TO #5, #7, #8, #10
and #12 TO #14)

#13.



$$\begin{aligned}
 c^2 &= a^2 + b^2 \\
 &= 5^2 + 3^2 \\
 &= 25 + 9 \\
 &= 34 \\
 c &= \sqrt{34} \\
 &\approx 5.8
 \end{aligned}$$

Feb 10-8:24 AM

 $3\sqrt{2}$ Mixed Radical

 $\sqrt{18}$ Entire Radical

Entire Radical \rightarrow Mixed Radical

$$\begin{aligned}
 \sqrt{18} &= \sqrt{9 \times 2} \\
 &= 3\sqrt{2}
 \end{aligned}$$

$$\begin{aligned}
 \sqrt{75} &= \sqrt{25 \times 3} \\
 &= 5\sqrt{3}
 \end{aligned}$$

$$\begin{aligned}
 \sqrt{162} &= \sqrt{81 \times 2} \\
 &= 9\sqrt{2}
 \end{aligned}$$

$$\begin{aligned}
 \sqrt[3]{32} &= \sqrt[3]{8 \times 4} \\
 &= 2\sqrt[3]{4}
 \end{aligned}$$

$$\begin{aligned}
 \sqrt[3]{54} &= \sqrt[3]{27 \times 2} \\
 &= 3\sqrt[3]{2}
 \end{aligned}$$

$$\begin{aligned}
 \sqrt{160} &= \sqrt{16 \times 10} \\
 &= 4\sqrt{10}
 \end{aligned}$$

Sep 12-10:57 AM

need
3
of
Something

$$\sqrt[3]{1080} = \sqrt[3]{10 \times 108}$$

$$= \sqrt[3]{2 \times 5 \times 2 \times 54}$$

$$= \sqrt[3]{2 \times 5 \times 2 \times 6 \times 9}$$

$$= \sqrt[3]{2 \times 5 \times 2 \times 2 \times 3 \times 3 \times 3}$$

$$\sqrt[3]{(2 \times 2 \times 2) \times (3 \times 3 \times 3) \times 5}$$

$$= 2 \times 3 \sqrt[3]{5}$$

$$= 6 \sqrt[3]{5}$$

$$\sqrt[3]{56} = \sqrt[3]{8 \times 7} = 2\sqrt[3]{7}$$

$$\sqrt[3]{56} = \sqrt[3]{2 \times 28}$$

$$= \sqrt[3]{2 \times 4 \times 7}$$

$$= \sqrt[3]{(2 \times 2 \times 2) \times 7} = 2\sqrt[3]{7}$$

$$\sqrt{9} = \sqrt{3 \times 3} = 3$$

$$\sqrt{25} = \sqrt{5 \times 5} = 5$$

$$6 \times 6 \times 6 = 216$$

Sep 12-11:07 AM

$$\sqrt{36} = \sqrt{6 \times 6} = 6$$

$$\sqrt{2 \times 18}$$

$$= \sqrt{2 \times 2 \times 9}$$

$$= \sqrt{(2 \times 2) \times (3 \times 3)}$$

$$= 2 \times 3 = 6$$

Sep 12-11:14 AM

Mixed Radicals \rightarrow Entire Radicals

$$\begin{aligned} 5\sqrt{2} &= \sqrt{5 \times 5 \times 2} \\ &= \sqrt{50} \end{aligned}$$

$$\begin{aligned} 7\sqrt[3]{13} &= \sqrt[3]{7 \times 7 \times 7 \times 13} \\ &= 4459 \end{aligned}$$

$$\begin{aligned} 3\sqrt{5} &= \sqrt{9 \times 5} \\ &= \sqrt{45} \end{aligned}$$

Sep 12-11:15 AM

$$\sqrt{a} = a^{\frac{1}{2}}$$

$$\sqrt[3]{n} = n^{\frac{1}{3}} \quad \wedge \quad \sqrt[3]{8} = 8^{\frac{1}{3}} = 2$$

$$\begin{aligned} \sqrt{37} &= 37^{\wedge .5} \\ &= \end{aligned}$$

Sep 12-11:20 AM

8. POWERS WITH RATIONAL EXPONENTS WITH A NUMERATOR OF 1:

$$x^{\frac{1}{n}} = \sqrt[n]{x}$$

EX.:

$$8^{\frac{1}{3}}$$

$$= \sqrt[3]{8}$$

$$= 2$$

Feb 10-10:00 AM

WE CAN ALSO USED PRIME FACTORIZATION TO SIMPLIFY A RADICAL.

EX.: Simplify each radical. $\rightarrow \sqrt[3]{8 \times 18}$

a) $\sqrt[2]{80}$

$$\begin{array}{c} \wedge \\ 8 \times 10 \\ \wedge \quad \wedge \\ 2 \times 4 \times 2 \times 5 \\ \wedge \quad \wedge \quad \wedge \\ 2 \times 2 \times 2 \times 2 \times 5 \end{array}$$

$4\sqrt{5}$

b) $\sqrt[3]{144}$

$$\begin{array}{c} \wedge \\ 2 \times 72 \\ \wedge \quad \wedge \\ 2 \times 2 \times 36 \\ \wedge \quad \wedge \quad \wedge \\ 2 \quad 2 \times 2 \times 18 \\ \wedge \quad \wedge \quad \wedge \\ 2 \quad 2 \quad 2 \times 2 \times 9 \\ \wedge \quad \wedge \quad \wedge \quad \wedge \\ 2 \quad 2 \quad 2 \quad 2 \times 3 \times 3 \end{array}$$

$2\sqrt[3]{18}$

c) $\sqrt[4]{162}$

$$\begin{array}{c} \wedge \\ 2 \times 81 \\ \wedge \quad \wedge \\ 2 \times 9 \times 9 \\ \wedge \quad \wedge \quad \wedge \quad \wedge \\ 2 \times 3 \times 3 \times 3 \times 3 \end{array}$$

$3\sqrt[4]{2}$

Feb 10-10:00 AM

CONCEPT REINFORCEMENT:

FPCM 10:

Page 218: 4, 5, 10 - 12, 14, 15, 16, 18

Feb 10-8:24 AM