20, 24, 15, 23, 17

15. $\sqrt{x^2}=\sqrt{144}$

$x=\pm 12$

17. $x^2+9=0$

-9

$\sqrt{x^2}=\sqrt{-9}$

$\emptyset$

20. $\frac{25y^2=-16}{25}$

$y^2=\frac{-16}{25}$

$\emptyset$

23. $4-16x^2=0$

$-4 \quad -4$

$\frac{-16x^2=-4}{-16}$

$\sqrt{x^2}=\sqrt{\frac{1}{4}}$

$x=\pm\frac{1}{2}$

24. $0=4+16x^2$

$-4 \quad -4$

$\frac{-4=16x^2}{16}$

$-\frac{1}{4}=x^2$

$\emptyset$

25. $81-9x^2=0$

-81

$\frac{-9x^2=-81}{-9}$

$\sqrt{x^2}=\sqrt{9}$

$x=\pm 3$

HW Assessment 3/25

22. $9x^2 - 81 = 0$

Simplifying Radicals

$\sqrt{98} \approx 9.899494937\ldots$

this cannot be expressed as a fraction. It is irrational

$98 = 2 \cdot 49$

$49 = 7 \cdot 7$

$\sqrt{2 \cdot 7^2}$

$\sqrt{2} \cdot \sqrt{7^2}$

$\sqrt{2} \cdot 7$

$7\sqrt{2}$

$\sqrt{13} = \sqrt{13}$

$\sqrt{60}$

$60 = 2 \cdot 30$

$30 = 2 \cdot 15$

$15 = 5 \cdot 3$

$2\sqrt{5 \cdot 3}$

$2\sqrt{15}$

$\sqrt{200}$

$200 = 100 \cdot 2$

$100 = 2 \cdot 50$

$50 = 25 \cdot 2$

$25 = 5 \cdot 5$

$2 \cdot 5\sqrt{2}$

$10\sqrt{2}$

$\sqrt[3]{200}$

$\sqrt[3]{200}$

100 2

50 2

25 2

5 5

$\sqrt[3]{8}$

2 4

2 2

$\sqrt[3]{2^3} = 2$

$2\sqrt[3]{25} = \sqrt[3]{200}$

$\sqrt{200} = 10\sqrt{2}$

your turn

$\sqrt{18}$ $\sqrt{220}$

$\sqrt{375}$