

45, 48, 11, 27, 8

$$8. \left(\frac{4}{81}\right)^{3/2} = \left(\sqrt{\frac{4}{81}}\right)^3 = \left(\frac{2}{9}\right)^3 = \frac{8}{729}$$

$$11. (-8)^{2/3} = \left(\sqrt[3]{-8}\right)^2 = (-2)^2 = 4$$

$$\sqrt[3]{(-8)^2} = \sqrt[3]{64} = 4$$

$$27. 25^{3/2} = \sqrt{25^3} = 5^3 = 125$$

$$45. 32^{1/5} = \sqrt[5]{32} = 2$$

$$48. 64^{1/3} = \sqrt[3]{64} = 4$$

HW Assessment
3/23

3. $32^{2/5}$

Express
as a radical
then
simplify

Expression: just give positive root

$$\sqrt{36} = 6$$

Equation: both pos + neg roots.

$$\sqrt{x^2} = \sqrt{36}$$

$$x = \pm 6 \quad \text{but } (-6)^2 \text{ also equals } 36$$

so there are two solutions!

$$x^2 = 49$$

$$x = \pm 7$$

$$x^2 = 4$$

$$x = \pm 2$$

$$\sqrt{4} = 2$$

$$\frac{5x^2}{5} = \frac{320}{5}$$

$$\sqrt{x^2} = \sqrt{64}$$

$$x = \pm 8$$

$$\frac{4x^2}{4} = \frac{49}{4}$$

$$\sqrt{x^2} = \sqrt{\frac{49}{4}}$$

$$x = \pm \frac{7}{2}$$

$$\frac{x^2}{4} - 8 = -7$$

+8 +8

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

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

$$x = \pm 2$$

$$x^2 + 81 = 0$$

-81

$$\sqrt{x^2} = \sqrt{-81}$$

∅

your turn

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

$$25x^2 + 81 = 0$$

$$x^2 = 5$$

$$x = \pm \sqrt{5}$$