BE-Alg. 2 1 TUESDAY 10-20-09

ACT 2009 2010 SAMPLE TEST

① WHAT is THE SMALLEST integer greater than $\sqrt{58}$?

② Simplify $\frac{3a^4}{3a^6}$

③ If $\frac{3\sqrt{7}}{a\sqrt{7}} = \frac{3\sqrt{7}}{7}$ then $a = ?$

Ⓐ 1 Ⓑ $\sqrt{7}$ Ⓒ 7 Ⓓ 21 Ⓔ 49

- TAKE OUT homework.

ANYONE TAKING ACT SATURDAY? Nov. 6 Reg. Due for 12/12 Test.

① $\sqrt{49} = 7$

$\sqrt{58} = ?$

$\sqrt{64} = \boxed{8}$

② $\boxed{\frac{1}{a^2}}$

③ $\boxed{\sqrt{7}}$

Homework Review – Pg. 248 # 29-45 odd:

(29) $\pm\sqrt{169} = \boxed{\pm 13}$ Perfect square

(31) $\sqrt{(-18)^2} = \sqrt{(-1)^2(18)^2} = \sqrt{(1)(18)^2} = \boxed{18}$

Since $(-18)^2$ is always positive.

(33) $\sqrt[7]{-128} = \boxed{-2}$ Since $2\cdot2\cdot2\cdot2\cdot2\cdot2\cdot2$

$8 \cdot 8 \cdot 2$

$64 \cdot 2 = 128$

(35) $\sqrt[3]{\frac{1}{125}} = \frac{\sqrt[3]{1}}{\sqrt[3]{125}} = \boxed{\frac{1}{5}}$

(37) $\sqrt[3]{-0.064} = \frac{\sqrt[3]{-64}}{\sqrt[3]{1000}} = \frac{-4}{10} = \boxed{\frac{-2}{5}}$ or $\boxed{-0.4}$

(39) $-\sqrt[6]{x^6} = \boxed{-|x|}$ Since $\sqrt[6]{x^6} = x^1$ (6: even, 1: odd)

(41) $\sqrt{64a^8} = \boxed{8a^4}$

(43) $\sqrt[3]{-c^6} = \boxed{-c^2}$ Since $(-c^2)(-c^2)(-c^2) = -c^6$

(45) $\sqrt[3]{(2z)^6} = (2z)^2 = \boxed{4z^2}$

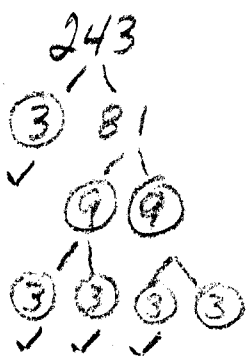
Homework review – Pg. 254 #15–25 ODD

(15) $\sqrt{243}$

$= \sqrt{3^4 \cdot 3}$

$= \sqrt{81 \cdot 3}$

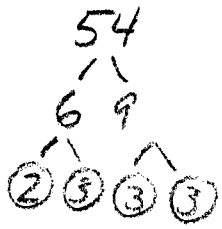
$= \boxed{9\sqrt{3}}$



(17) $\sqrt[3]{54}$

$= \sqrt[3]{27}\sqrt[3]{2}$

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



(19) $\sqrt{50x^4} = \sqrt{25}\sqrt{2}\sqrt{x^4} = \boxed{5x^2\sqrt{2}}$

(21) $\sqrt{18x^2y^3} = \sqrt{9}\sqrt{2}\sqrt{x^2}\sqrt{y^2}\sqrt{y}$

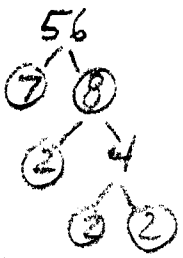
Either

$\boxed{3|x|y\sqrt{2y}}$

y is originally part of y^3 which, for this problem, must be positive

(23) $\sqrt[3]{56y^6z^3}$

$= \sqrt[3]{8 \cdot 7 \cdot y^2y^2y^2z^2z}$



$\Rightarrow 3 \cdot 2y^2z\sqrt[3]{7} = \boxed{6y^2z\sqrt[3]{7}}$

$\sqrt[3]{8}$

(25) $\sqrt[4]{\frac{1}{81}c^5d^4} = \frac{\sqrt[4]{1}\ \sqrt[4]{c^4 \cdot c^1}\ \sqrt[4]{d^4}}{\sqrt[4]{81}}$

Either

$= \left(\frac{1}{3}\right)(c)(|d|)\sqrt{c} = \boxed{\frac{c|d|\sqrt{c}}{3}}$