6-6 Rational Exponents

Simplify each expression.

55.
$$\frac{c^{\frac{2}{3}}}{c^{\frac{1}{6}}}$$

ANSWER:

$$c^{\frac{1}{2}}$$

57. $\sqrt{23} \cdot \sqrt[3]{23^2}$

ANSWER:

$$23\sqrt[6]{23}$$

59. $\sqrt{81}$

ANSWER:

3

60.
$$\sqrt[4]{\sqrt{256}}$$

ANSWER:

2

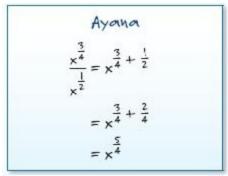
62.
$$\frac{xy}{\sqrt[3]{z}}$$

ANSWER:

$$\frac{xy\sqrt[3]{z^2}}{z}$$

70. CCSS CRITIQUE Ayana and Kenji are

simplifying $\frac{x^{\frac{3}{4}}}{x^{\frac{3}{2}}}$. Is either of them correct? Explain your reasoning.



Kenji
$$\frac{x^{\frac{3}{4}}}{x^{\frac{1}{2}}} = x^{\frac{3}{4} + \frac{1}{2}}$$

$$= x^{\frac{3}{4} \cdot \frac{2}{7}}$$

$$= x^{\frac{3}{2}}$$

ANSWER:

No; Ayana added the exponents and Kenji divided the exponents. The exponents should have been subtracted.