

## Warm up:

put at top of today's assignment

Simplify. (No decimals.)

a.  $\sqrt{2} \cdot \sqrt{10}$

b.  $\frac{\sqrt{21}}{\sqrt{3}}$

c.  $\sqrt{5} + \sqrt{6}$

d.  $\sqrt{21} - \sqrt{3}$

warm-up

Simplify. (No decimals.)

**E.**  $5\sqrt{3} + 6\sqrt{3}$

**F.**  $\sqrt{x^2 + y^2}$

**G.**  $\sqrt{45} - \sqrt{20}$

**H.**  $\sqrt[3]{2} * \sqrt[3]{32}$

rationalize the denominator:

I.  $\frac{20}{\sqrt{5}}$

J.  $\frac{3}{2\sqrt{6}}$

Simplify: K.  $\sqrt[3]{12} * \sqrt[3]{2}$

See next 3 slides to check your work!

## Warm up:

put at top of today's assignment

Simplify. (No decimals.)

a.  $\sqrt{2} \cdot \sqrt{10}$

$$\begin{aligned} &= \sqrt{2 \cdot 10} = \sqrt{20} \\ &= \sqrt{4} \sqrt{5} \\ &= \boxed{2\sqrt{5}} \end{aligned}$$

c.  $\boxed{\sqrt{5} + \sqrt{6}}$

as is

b.  $\frac{\sqrt{21}}{\sqrt{3}} = \sqrt{\frac{21}{3}} = \boxed{\sqrt{7}}$

d.  $\boxed{\sqrt{21} - \sqrt{3}}$

as is

warm-up

Simplify. (No decimals.)

**E.**  $5\sqrt{3} + 6\sqrt{3}$

$= \boxed{11\sqrt{3}}$

**F.**

$\sqrt{x^2 + y^2}$  <sup>as is</sup>

$\sqrt{x^2 + y^2} \neq x + y$

**G.**  $\sqrt{45} - \sqrt{20}$

$\sqrt{9\sqrt{5}} - \sqrt{4\sqrt{5}}$

$3\sqrt{5} - 2\sqrt{5}$

$= \boxed{\sqrt{5}}$

**H.**

$\sqrt[3]{2} * \sqrt[3]{32}$

$\sqrt[3]{64} = \boxed{4}$

rationalize the denominator:

$$\text{I. } \frac{20\sqrt{5}}{\sqrt{5}\sqrt{5}} = \frac{20\sqrt{5}}{5} = \boxed{4\sqrt{5}}$$

$$\begin{aligned} &\checkmark \\ &(\sqrt{5})^2 \\ &\text{or } \sqrt{5^2} \end{aligned}$$

Simplify: K.  $\sqrt[3]{12} \cdot \sqrt[3]{2}$

$$\begin{aligned} \sqrt[3]{24} &= \sqrt[3]{8 \cdot 3} \\ &= \boxed{2\sqrt[3]{3}} \end{aligned}$$

$$\text{J. } \frac{3\sqrt{6}}{2\sqrt{6}\sqrt{6}}$$

$$= \frac{3\sqrt{6}}{2 \cdot 6}$$

$$= \frac{3\sqrt{6}}{12} = \boxed{\frac{\sqrt{6}}{4}}$$

# **Exponent Quiz coming soon!!**

**20 points**

**No notes**

**No calculator**

