Homework Review:

Sect 10.2 | #'s 18 - 26 evens

18) $2\sqrt{14}$

20) $9\sqrt{2}$

22) $7\sqrt{5}$

24) $10\sqrt{2}$

26) 80

(26) $4\sqrt{2} \cdot 5\sqrt{8}$

$20\sqrt{16}$

$20 \cdot 4$

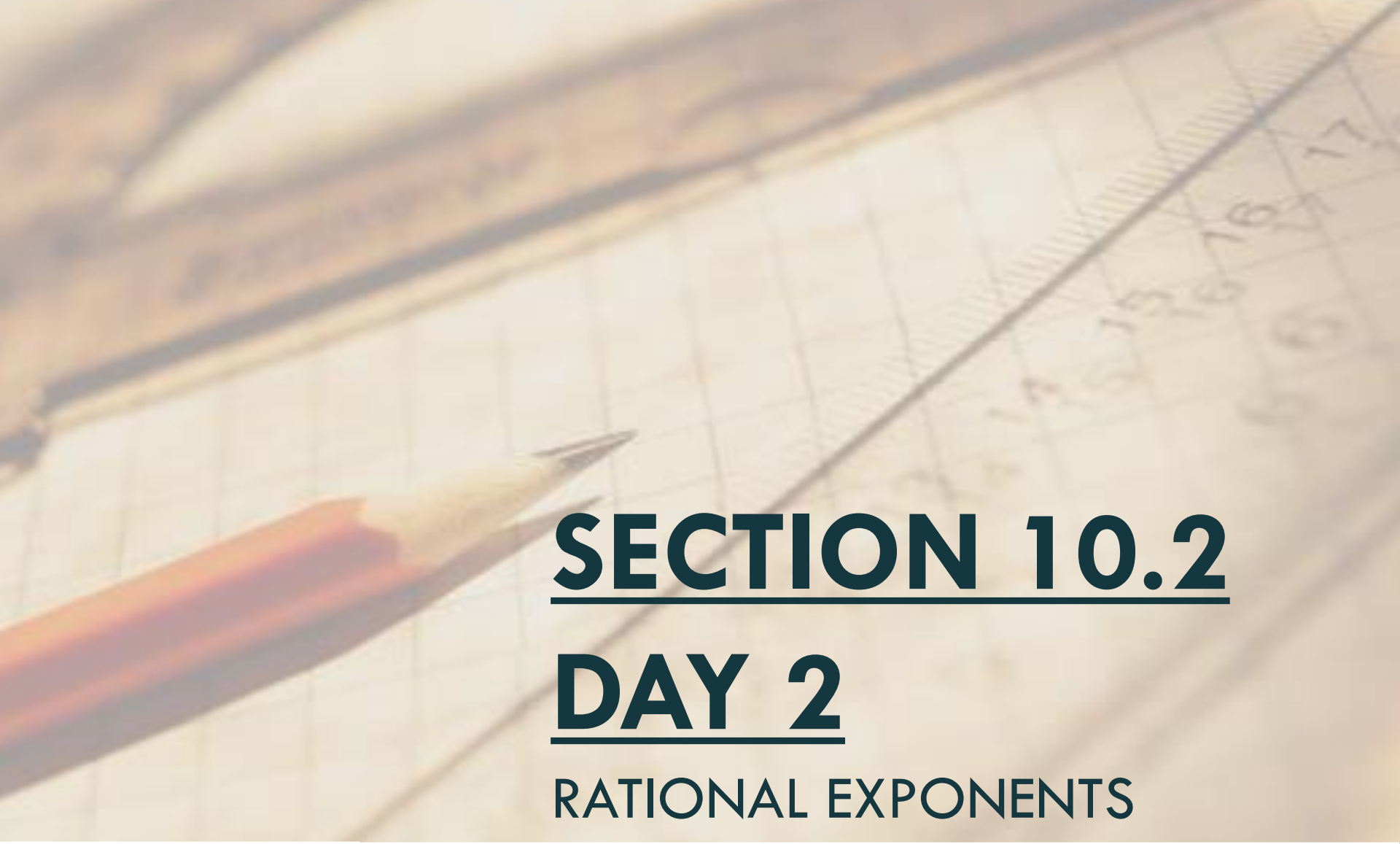
80

(20) $3\sqrt{18}$

$3\sqrt{9} \cdot \sqrt{2}$

$3 \cdot 3\sqrt{2}$

$9\sqrt{2}$



SECTION 10.2

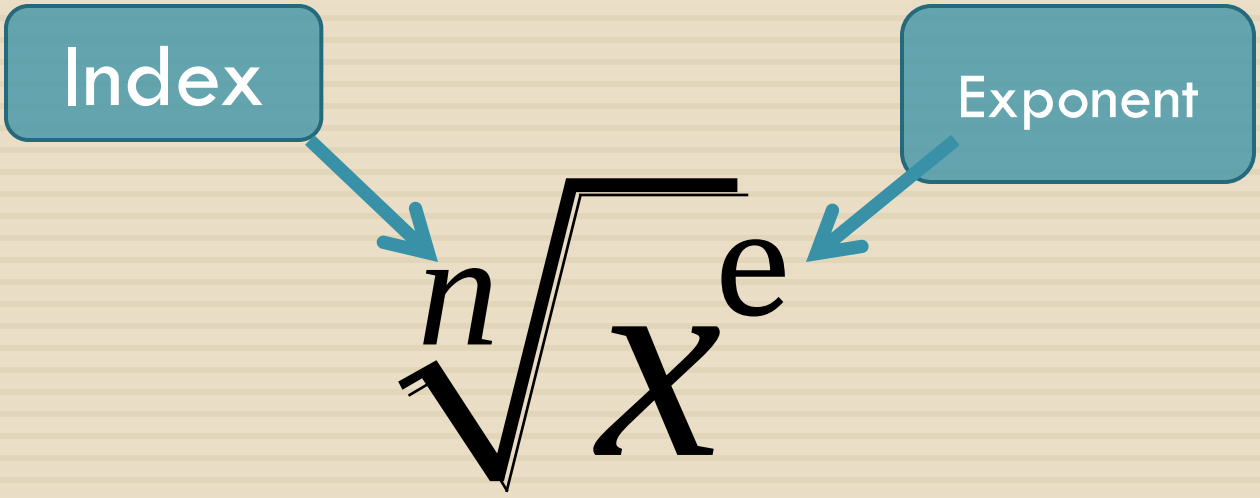
DAY 2

RATIONAL EXPONENTS

SWBAT:

- write expressions with exponents in radical form.
- Simplify expressions in radical or exponent form.

Simplifying Radicals With Variables



- If there is no number in the index, it means n = 2
- Think "square root" = 2nd root

Simplifying Radicals With Variables

- Simplify

$\sqrt[2]{a^4}$

exponent / index

$\frac{4}{2}$

a^2

$\sqrt{a^2}\sqrt{a^2}$

$a \cdot a$

a^2

$\sqrt[2]{b^5}$

$b^2\sqrt{b}$

$\sqrt{b^2}\sqrt{b^2}\sqrt{b}$

$b \cdot b\sqrt{b}$

$b^2\sqrt{b}$

Simplifying Radicals With Variables

$$\sqrt{90x^3y^4z^5}$$

$\sqrt{90}\ \sqrt{x^3}\ \sqrt{y^4}\ \sqrt{z^5}$

$\sqrt{9}\sqrt{10}\ \sqrt{x^2}\sqrt{x}\ \sqrt{y^4}\ \sqrt{z^4}\sqrt{z}$

$3\sqrt{10}\cdot x\sqrt{x}\cdot y^2\cdot z^2\sqrt{z}$

$3xy^2z^2\sqrt{10xz}$

Simplifying Radicals With Variables

$$\sqrt{32r^2k^4t^5}$$

$\sqrt{x^2}$

x

$\sqrt{32}\sqrt{r^2}\sqrt{k^4}\sqrt{t^5}$

$\sqrt{16}\sqrt{2}\cdot\sqrt{r^2}\cdot\sqrt{k^4}\cdot\sqrt{t^4}\sqrt{t}$

$4\sqrt{2}\cdot r\cdot k^2\cdot t^2\sqrt{t}$

$4rk^2t^2\sqrt{2t}$

Simplifying Radicals With Variables

$$\sqrt{6xy^5z^7} \cdot \sqrt{6y^5}$$

$$\sqrt{36xy^{10}z^7}$$

$$\sqrt{36} \cdot \sqrt{x} \cdot \sqrt{y^{10}} \cdot \sqrt{z^6}\sqrt{z}$$

$$6 \cdot \sqrt{x} \cdot y^5 \cdot z^3\sqrt{z}$$

$$6y^5z^3\sqrt{xz}$$

HOMEWORK

- **Worksheet – Simplify and color!**