

40

$$4n^2 - 20n + 25$$

$$(2n - 5)^2$$

$$\frac{-10}{2} \times \frac{-10}{2} = 100$$

$$\frac{-10}{2} + \frac{-10}{2} = -20$$

$$(4n^2 - 10n)(-10n + 25)$$

$$(2n - 5)(2n - 5)$$

(36)

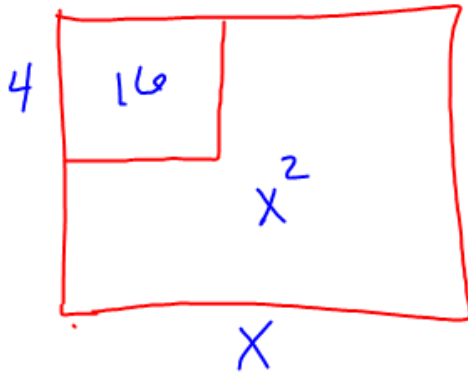
$$28k^2 + 13k - 6$$

$$28x^2 - 8x + 21x - 6$$

$$\begin{aligned} \underline{-8} \times \underline{21} &= -168 \\ \underline{-8} + \underline{21} &= 13 \end{aligned}$$

$$(4x + 3)(7x - 2)$$

(46)



$$x^2 - 16; (x-4)(x+4)$$

52

$$18x^2 - 8$$

$$2(9x^2 - 4)$$

$$2(3x - 2)(3x + 2)$$



Square Roots and Radicals

$$\sqrt{ab} = \sqrt{a} \cdot \sqrt{b}$$

$$\sqrt{\frac{a}{b}} = \frac{\sqrt{a}}{\sqrt{b}}$$

Ex 1

$$\sqrt{48}$$

$$\sqrt{16 \cdot 3}$$

$$4\sqrt{3}$$

$$-\sqrt{\frac{5}{7}} = -\frac{\sqrt{5}}{\sqrt{7}}$$

$$\frac{-\sqrt{5}}{\sqrt{7}} \cdot \frac{\sqrt{7}}{\sqrt{7}}$$

$$-\frac{\sqrt{35}}{7}$$

radicals and 5.5 start - SMART Notebook

File Edit View Insert Format Draw Help

Perfect Squares.
144, 169, 196, 225

[Extend Page](#)

The image shows a screenshot of the SMART Notebook software interface. The window title is "radicals and 5.5 start - SMART Notebook". The menu bar includes "File", "Edit", "View", "Insert", "Format", "Draw", and "Help". A toolbar with various icons for navigation and drawing is visible below the menu bar. On the left side, there is a vertical toolbar with icons for document, image, and other functions. The main workspace contains handwritten text in red ink: "Perfect Squares." followed by the numbers "144, 169, 196, 225" in black ink. At the bottom center of the workspace, there is a blue link labeled "Extend Page".

Ex 2

$$5\sqrt{320}$$

$$5\sqrt{64 \cdot 5}$$

$$40\sqrt{5}$$

$$(2\sqrt{27})^2$$

$$2\sqrt{27} \cdot 2\sqrt{27}$$

or

$$4(27)$$

$$108$$

Ex 3

~~$$\sqrt{10}$$~~

$$-\sqrt{10^4}$$

$$-10^2$$

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

$$x^2 y$$



5.5

Y-intercepts

$(0, 2)$

$$y = x^2 + 3x + 2$$

X-intercepts

$(-1, 0)$

$(-2, 0)$



Zero-Product Property

$$0 = x^2 + 3x + 2$$

$$0 = (x + 1)(x + 2)$$

$$x + 1 = 0 \quad x + 2 = 0$$

$$x = -1 \quad x = -2$$

Solving by $\sqrt{\quad}$

$$5x^2 - 180 = 0$$

$$\frac{5x^2}{5} = \frac{180}{5}$$

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

$$x = \pm 6$$

$$\sqrt{100}$$

$$10 \quad -\sqrt{25}$$

$$-5$$

$$x^2 = 81$$

$$x = \pm 9$$

$$x^2 = \frac{49}{9}$$

$$x = \pm \frac{7}{3}$$

* Only when
there is

No ~~bx~~
term

(no $ax^2 + \underline{bx} + c$)

$$x^2 + 3x + 2 = 0$$

$$x^2 + 3x = -2$$

$$\sqrt{(x-3)^2} = \sqrt{\frac{16}{81}}$$

$$x-3 = \pm \frac{4}{9}$$

$$x = 3 \pm \frac{4}{9}$$

$$3\frac{4}{9} \text{ or } 2\frac{5}{9}$$

$$3 - \frac{4}{9}$$

$$2 + \frac{9}{9} - \frac{4}{9}$$

x

5.5
1st column