HW Review p.723

⑮ $2\sqrt{a^4 b^5}$

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

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

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

$\sqrt{x \cdot x} = x$

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

$\sqrt{(c+2)(c+2)} = c+2$

1

p. 755

(17) $\sqrt{x} - 28 = 0$ $(\sqrt{x} - 28)^2 = 0^2$

$\phantom{\sqrt{x}} +28 \quad +28$ $(\sqrt{x} - 28)(\sqrt{x} - 28) = 0$

$(\sqrt{x})^2 = 28^2$

$x = 784$

(18) $8\sqrt{x-5} + 34 = 58$

$\phantom{8\sqrt{x-5} +3}-34 \quad -34$

$$\frac{8\sqrt{x-5}}{8} = \frac{24}{8}$$

$$\left(\sqrt{x-5}\right)^2 = 3^2$$

$$x - 5 = 9$$

$$x = 14$$

3

20 $-\sqrt{5x} + 6 = 5$
$\quad\quad\quad -6 \quad -6$

$(-\sqrt{5x})^2 = (-1)^2$

$\sqrt{5x} = 1$

$\frac{\sout{5x}}{\sout{5}} = \frac{1}{5}$ no sol.

$\sqrt{5x} = 1$

$\sqrt{5\left(\frac{1}{5}\right)} + 6 = 5$

$\sqrt{1} + 6 = 5$

$1 + 6 = 5$

$7 = 5 \quad \times$

21 $\sqrt{x} + 36 = 0$

$\sqrt{x} = -36$

(19) $\sqrt{\dfrac{4}{49}} = \dfrac{\sqrt{4}}{\sqrt{49}} = \dfrac{2}{7}$

(22) $(x)^2 = \left(\sqrt{2-x}\right)^2$

$x^2 = 2 - x$

$x^2 + x - 2 = 0$

$(x + 2)(x - 1)$

$x + 2 = 0$ $\qquad$ $x - 1 = 0$

~~$x = -2$~~ $\qquad$ $\boxed{x = 1}$

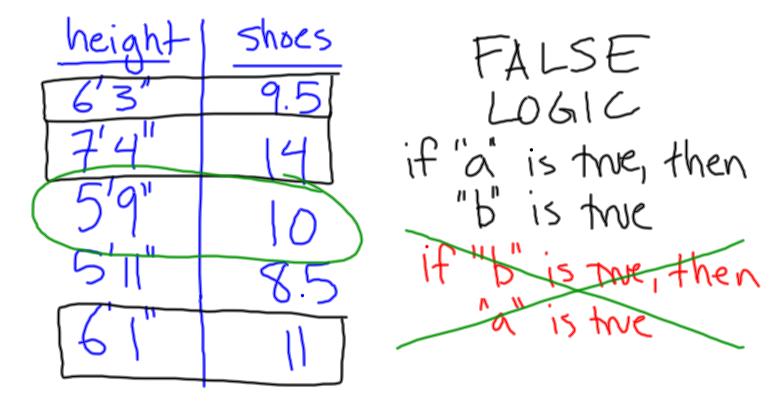$-2 = \sqrt{2-(-2)}$

$-2 = \sqrt{4}$

$-2 = 2$ $\quad \times$

$1 = \sqrt{2-1}$

$1 = \sqrt{1}$

$1 = 1 \checkmark$

In a recent survey, it was reported that of drivers who recently got in an accident, 75% of them were NOT eating food when they crashed their car. Is it therefore safer to eat while driving? Why or why not?

How many people <u>overall</u> are eating while driving?

1000 drivers, 100 accidents — 75 no food — 25 food

900 were eating : 25/900 = 2.7%
100 weren't : 75/100 = 75%

200 were eating : 25/200 = 12.5%
800 weren't : 75/800 = 8.8%

MISSING INFORMATION

100% of men over 6 feet tall wear shoes that are at least size 9. My friend wears shoes that are size 10. Is he over 6 feet tall? Why or why not?

height	shoes
6'3"	9.5
7'4"	14
5'9"	10
5'11"	8.5
6'1"	11

FALSE LOGIC

if "a" is true, then "b" is true

if "b" is true, then "a" is true

Probabilities :

Express the likelihood that something is true.

$$\frac{a}{b}$$

a ← total # of cases where it is true

b ← total # of cases

$X\%$ ← # of cases out of 100 where it is true

Homework:

   "People & Probability"