4/4pts. = 100%.

[redacted]

Chapter 15.4 Quiz

(1.) A baseball team has home games on Friday & Sunday. The two games together earn $3633.50 for the team. Friday's generates $318.50 less than Sunday's. How much was taken in at each game?

x = Friday's y = Sunday's

$x + y = \$3633.50$

$y = x + 318.50$

$x + (x + 318.50) = 3633.50$

$2x + 318.50 = 3633.50$

$-318.50 \quad -318.50$

$\frac{2x}{2} = \frac{3315.00}{2}$

$x = \$1657.50$

$y = 1657.50 + 318.50$

$y = \$1976.00$

Friday's game: $1657.50
Sunday's game: $1976.00

(2.) Buildings A is 150 ft. shorter than Building B. The total height of both is 1530ft. Find the height of each.

x = Building A y = Building B

$x + y = 1530ft$

$x = y - 150ft$

$(y - 150) + y = 1530$

$2y - 150 = 1530$

$+150 \quad +150$

$\frac{2y}{2} = \frac{1680}{2}$

$y = 840ft.$

$x = 840 - 150$

$x = 690ft.$

Check: $690 + 840 = 1530$

$1530 = 1530$ ✓

Building A is 690ft.
Building B is 840ft.

(3.) [illegible] edge, [illegible]
the [illegible]
the [illegible]
rate of each. x = car y = bike

$9x + 9y = 531$

$x = y + 32$

$9(y+32) + 9y = 531$

$9y + 288 + 9y = 531$

$18y + 288 = 531$

$-288 \quad -288$

$\frac{18y}{18} = \frac{243}{18}$

$y = 13.5$ mph

$x = 13.5 + 32$

$x = 45.5$ mph

Check: $9(45.5) + 9(13.5) = 531$

$409.5 + 121.5 = 531$

$531 = 531$ ✓

Car's rate: 45.5 mph
Bike's rate: 13.5 mph

(4.) How many lbs. of nuts selling for \$9/lb. and raisins selling for \$3/lb. should a person combine to obtain 150 lbs. of trail mix selling for \$5/lb.?

	lbs	\$/lb.	\$
50	x	9	$9x$
100	y	3	$3y$
	[illegible]		[illegible]

$x + y = 150$

$9x + 3y = 750$

$x + y$ [illegible]

$-y \quad -y$

$x = -y + 150$

$x = -100 + 150$

$x = 50$ lbs.

[illegible] y [illegible] $= 750$

$-6y + 1350 = 750$

$-1350 \quad -1350$

$\frac{-6y}{-6} = \frac{-600}{-6}$

$y = 100$ lbs.

Check: $50 + 100 = 150$

$150 = 150$ ✓

50 [illegible] of [illegible]
[illegible]