NAME _____ HW # 15

Solve for the variable in each proportion.

1. $\frac{4}{3} = \frac{8}{x}$

$4x = 24$

$\frac{4x}{4} = \frac{24}{4}$

$x = 6$

2. $\frac{7}{5} = \frac{x}{3}$

$5x = 21$

$\frac{5x}{5} = \frac{21}{5}$

$x = 4.2$

3. $\frac{7}{b+5} = \frac{10}{5}$

$10(b+5) = 35$

$10b + 50 = 35$

$10b = -15$

$\frac{10b}{10} = \frac{-15}{10}$

$b = -1.5$

4. $\frac{\frac{1}{3}}{8} = \frac{2}{d}$

$\frac{1}{3}d = \frac{16}{1} \cdot \frac{3}{1}$

$d = 48$

5. Are the following examples a proportion? Justify using cross products.

a. $\frac{8}{14}$ and $\frac{4}{7}$ — $56 = 56$

Yes

b. $\frac{0.5}{7}$ and $\frac{2}{30}$ — $15 \neq 14$

No

6. Jane bought 3lbs. of apples for $4.75 and Adam bought 4 lbs. of apples for $5.50. Does this represent a proportional relationship? ~~Show work to justify.~~

19 $\frac{\$4.75}{3\text{lbs.}}$ $\frac{\$5.50}{4\text{lbs}}$ 16.50

No

Spiral Review....

7. Which expression is equivalent to $4.8 + 2.2w - 1.4w + 2.4$?

Combine like terms

$0.8w + 7.2$

A. $0.4(6 + 2w)$ B. $0.8(9 + w)$ C. $1.6(3 + 2w)$ D. $3.6(2 + w)$

$7.2 + 0.8w$

8. Simplify the expression $4x - 3(x - 2y) + \frac{1}{2}(6x - 8y)$

$4x - 3x + 6y + 3x - 4y$

$4x + 2y$