Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Table #: \_\_\_\_\_ Period: \_\_\_\_\_\_\_ Date: \_\_\_\_\_

**5.2B Proportions\_Classwork**

*Objective: use equivalent ratios to determine whether two ratios form a proportion; use the Cross Products Property to determine whether two ratios form a proportion. (CC.SS.7.RP.2a MP3: Construct Viable Argument)*

*HW: 5.2B worksheet*

|  |  |  |  |
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| ***REVIEW:*** *Solve each problem*

|  |  |  |
| --- | --- | --- |
| 1. $5.4=2x$
 | 1. $\frac{n}{6}=-7$
 | 1. $4\left(y-2\right)=6$
 |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Tell whether the two rates form a proportion.***

|  |  |
| --- | --- |
| 1. 7 inches in 9 hours; 42 inches in 54 hours.
 | 1. 12 players from 21 teams, 15 players from 24 teams
 |
| 1. 440 calories in 4 servings; 300 calories in 3 servings
 | 1. 120 units made in 5 days; 360 units made in 14 days
 |
| 1. 66 wins in 172 at bats; 43 wins in 123 at bats
 | 1. 68 hits in 172 at bats; 43 hits in 123 bats
 |
| 1. You can do 90 sit-ups in 2 minutes. Your friend can do 135 sit-ups in 3 minutes? Do these rates form a proportion? Explain.
 | 1. Find the heart rates of you and your friend. Do you these rates from a proportion? Explain.

 |

 |
| Each problem must be set up this way: |  |
| 1. Write the proportion
 | $$\frac{8}{3}=\frac{192}{n}$$ |
| 1. Write the cross products
 | $$8∙n=192∙3$$ |
| 1. Multiply
 | $$8n=576$$ |
| 1. Undo multiplication by using division
 | $$\frac{8n}{8}=\frac{576}{8}$$ |
| 1. divide
 | $$n=72$$ |

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***Solve each proportion. Be sure to set it up the correct way and show all work.***

|  |  |  |
| --- | --- | --- |
| 1. $\frac{4}{9}=\frac{10}{x}$
 | 1. $\frac{5}{2}=\frac{6}{y}$
 | 1. $\frac{y}{42.3}=\frac{144}{56.4}$
 |
| 1. $\frac{21}{27}=\frac{m}{18}$
 | 1. $\frac{32.5}{25}=\frac{97.5}{w}$
 | 1. $\frac{26}{k}=\frac{39}{9}$
 |