14.4

Solving Proportions

Do Now

1) **Write a proportion to find how many points a student needs to score on the test to get the given score.**

   a) test worth 80 points; test score of 80%

   b) test worth 150 points; test score of 96%

Review

Solve the missing variable in the proportion mentally.

2) $\dfrac{5}{8} = \dfrac{20}{d}$

3) $\dfrac{7}{z} = \dfrac{14}{10}$

4) $\dfrac{21}{24} = \dfrac{x}{8}$

Solve the missing variable.

2) $\dfrac{5}{8} = \dfrac{20}{d}$

3) $\dfrac{7}{z} = \dfrac{14}{10}$

4) $\dfrac{21}{24} = \dfrac{x}{8}$

What are Proportions?

Proportions are EQUAL RATIOS

$$\frac{3}{5} = \frac{6}{10}$$

Cross Products

$$5 \bullet 6 = 10 \bullet 3$$

Using Cross Products to Solve Proportions

1) $\dfrac{w}{6} = \dfrac{6}{9}$

Using Cross Products to Solve Proportions

2) $\dfrac{12}{10} = \dfrac{a}{15}$

Using Cross Products to Solve Proportions

3) $\dfrac{9}{y} = \dfrac{3}{17}$

Using Cross Products to Solve Proportions

4) $\dfrac{x}{8} = \dfrac{7}{10}$

Practice

5) $\dfrac{x}{25} = \dfrac{6}{10}$

Practice

6) $\dfrac{2}{9} = \dfrac{3}{d}$

7) $\dfrac{b}{10} = \dfrac{3}{4}$

8) $\dfrac{c}{15} = \dfrac{5}{6}$