Mastery Algebra 1 **Practice Mastery Quiz 2-7** Name: KEY

Per: ☐

2-7 Solve Proportions

Solve. If necessary, leave answers as reduced fractions or a decimal rounded to the nearest tenth.

1. $\frac{6}{x}=\frac{4}{14}$

$6(14) = x(4)$

$\frac{84}{4} = \frac{4x}{4}$

$21 = x$

2. $\frac{6}{9}=\frac{8}{g}$

$6g = 9(8)$

$\frac{6g}{6} = \frac{72}{6}$

$g = 12$

3. $\frac{5}{8}=\frac{x+2}{24}$

$5(24) = 8(x+2)$

$120 = 8x + 16$

$-16 \quad -16$

$\frac{104}{8} = \frac{8x}{8}$

$x = 13$

4. $\frac{3n+5}{3}=\frac{n-1}{9}$

$9(3n+5) = 3(n-1)$

$27n + 45 = 3n - 3$

$-3n \quad -3n$

$24n + 45 = -3$

$-45 \quad -45$

$\frac{24n}{24} = \frac{-48}{24}$

$n = -2$

Write a proportion to represent the situation, and then solve it. Round to the nearest tenth.

5. Mr. Fuller ran the first 2 miles of a race in 11 minutes. If he is able to maintain the same pace, how long will it take him to finish the 6.2 miles?

$\frac{mi}{min}$ $\frac{2}{11} = \frac{6.2}{x}$

$2x = 11(6.2)$

$\frac{2x}{2} = \frac{68.2}{2}$

$x = 34.1$

At the same pace, it will take him 34.1 min to run all 6.2 miles.