Math 6 Unit 4 worksheet: Finding a missing value in a pair of equal ratios

Name _____ Date _____ Period _____

1. Find the missing value. Use a whole scaling number, across or within, and check by scaling.

(a) $6 : 5 = 42 : ?$ (b) $9 : 4 = ? : 28$ (c) $8 : 56 = 6 : ?$ (d) $36 : 27 = 4 : ?$

(e) $3 : 24 = 11 : ?$ (f) $45 : 10 = ? : 2$

2. Find the missing value. When no whole scaling number works, go through a friendlier ratio first. Write a fraction answer as a mixed number.

(a) $6 : 10 = 9 : ?$ (b) $8 : 6 = ? : 9$ (c) $10 : 7 = 15 : ?$ (d) $9 : 12 = ? : 10$

(e) $6 : 4 = ? : 14$ (f) $8 : 5 = 3 : ?$

3. A class makes slime with 3 bottles of glue for every 6 spoonfuls of activator. For a slime day the whole grade uses 27 bottles of glue. How many spoonfuls of activator keep the same ratio?

4. A soccer league has 3 coaches for every 24 players. Next season it will have 7 coaches. How many players can it take and keep the same ratio? Say whether you reasoned across or within, and why.

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5. A robotics club uses 3 meters of wire for every 4 robots it builds. This year the club will build 10 robots. How many meters of wire does it need?

6. The rule for a school trip is at least 2 adults for every 15 students. 50 students are going. How many adults must go?

7. Omar solves $6 : 15 = ? : 10$. He writes: "From 15 to 10 is 5 less, so the first part is 5 less too. The missing value is $6 - 5 = 1$."

(a) Explain what is wrong with Omar's reasoning.

(b) Find the missing value and check it by scaling.

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