Math 6 Unit 2 worksheet: Dividing by multiplying by the reciprocal

Name _____ Date _____ Period _____

1. Fill in each blank with the reciprocal that makes the product 1.

(a) $\frac{5}{8} \times \square = 1$

(b) $\square \times 10 = 1$

(c) $\frac{1}{15} \times \square = 1$

(d) $\frac{13}{6} \times \square = 1$

2. Divide by multiplying by the reciprocal. Give each answer in simplest form.

(a) $\frac{3}{8} \div \frac{5}{6}$

(b) $\frac{7}{9} \div \frac{2}{3}$

(c) $\frac{1}{6} \div \frac{1}{9}$

(d) $10 \div \frac{4}{7}$

(e) $\frac{4}{9} \div 8$

(f) $\frac{21}{4} \div 7$

(g) $\frac{15}{16} \div \frac{5}{12}$

(h) $\frac{6}{25} \div \frac{9}{10}$

3. Find the missing number in each division. Check each answer by doing the division.

(a) $\frac{2}{3} \div \square = 4$

(b) $\square \div \frac{3}{5} = \frac{10}{9}$

(c) $6 \div \square = \frac{9}{2}$

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4. Diego refills the flour canisters at a bakery counter. A new sack holds 4 kg of flour, and each canister takes $\frac{2}{5}$ kg to fill. How many canisters can the sack fill? Check your answer by multiplying.

5. Without dividing, say whether each quotient is greater than 1 or less than 1, and give the reason in a few words. Then find each quotient in simplest form to confirm.

(a) $\frac{5}{9} \div \frac{2}{3}$ (b) $\frac{11}{12} \div \frac{5}{6}$ (c) $3 \div \frac{7}{2}$

(d) $\frac{4}{5} \div \frac{1}{10}$

6. Isabel divides fractions her own way: she divides the top numbers and divides the bottom numbers. For $\frac{8}{15} \div \frac{4}{5}$ she writes $\frac{8 \div 4}{15 \div 5} = \frac{2}{3}$.

(a) Find $\frac{8}{15} \div \frac{4}{5}$ by multiplying by the reciprocal, and check Isabel's answer by multiplying it by the divisor.

(b) Try Isabel's way on $\frac{3}{4} \div \frac{2}{5}$. What goes wrong? Find this quotient by multiplying by the reciprocal.

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