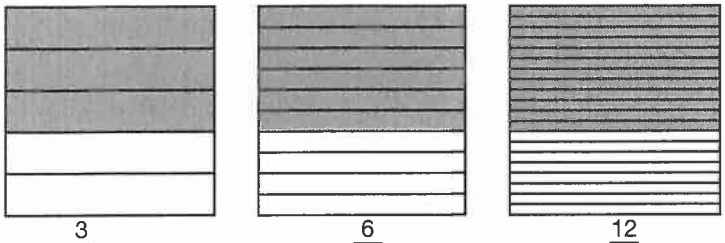
Name _____

Reteaching
9-4

Equivalent Fractions

The fractions shown below are equivalent.
They all describe the same part of a whole.



$\frac{3}{5}$ $\frac{6}{10}$ $\frac{12}{20}$

To find equivalent fractions, multiply or divide the numerator and denominator by the same number.

$\frac{3}{5} \times \frac{2}{2} = \frac{6}{10}$ $\frac{6}{10} \times \frac{2}{2} = \frac{12}{20}$ $\frac{12}{20} \div \frac{2}{2} = \frac{6}{10}$

$\frac{6}{10} \div \frac{2}{2} = \frac{3}{5}$ $\frac{12}{20} \div \frac{4}{4} = \frac{3}{5}$

Name two equivalent fractions for each fraction. Sample answers given for 1–4.

1. $\frac{1}{3}$ $\frac{2}{6}, \frac{3}{9}$
2. $\frac{2}{12}$ $\frac{1}{6}, \frac{4}{24}$
3. $\frac{4}{20}$ $\frac{2}{10}, \frac{1}{5}$
4. $\frac{2}{16}$ $\frac{1}{8}, \frac{4}{32}$

Find the missing number to make the fractions equivalent.

5. $\frac{4}{7} = \frac{8}{\square}$ 14
6. $\frac{\square}{18} = \frac{4}{6}$ 12
7. $\frac{3}{4} = \frac{\square}{12}$ 9
8. $\frac{15}{\square} = \frac{3}{4}$ 20

9. **Number Sense** Are $\frac{3}{4}$ and $\frac{12}{16}$ equivalent fractions? Explain.

Yes: If you multiply the numerator and denominator of $\frac{3}{4}$ by 4, you get $\frac{12}{16}$.

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Name _____

Practice
9-4

Equivalent Fractions

Name two equivalent fractions for each fraction.

Sample answers given for 1–6.

1. $\frac{5}{15}$ $\frac{1}{3}$; $\frac{10}{30}$
2. $\frac{6}{36}$ $\frac{1}{6}$; $\frac{3}{18}$
3. $\frac{2}{12}$ $\frac{1}{6}$; $\frac{4}{24}$
4. $\frac{4}{28}$ $\frac{2}{14}$; $\frac{1}{7}$
5. $\frac{3}{21}$ $\frac{6}{42}$; $\frac{1}{7}$
6. $\frac{2}{11}$ $\frac{4}{22}$; $\frac{6}{33}$

Find the missing number to make the fractions equivalent.

7. $\frac{4}{13} = \frac{8}{x}$ $x = 26$
8. $\frac{12}{30} = \frac{n}{90}$ $n = 36$
9. $\frac{q}{54} = \frac{2}{9}$ $q = 12$
10. $\frac{14}{h} = \frac{7}{20}$ $h = 40$

11. Renie gave each of six people $\frac{1}{10}$ of a veggie pizza. Renie has $\frac{2}{5}$ of the pizza left. Explain how this is true.

Sample answer: Renie gave away $\frac{6}{10}$, or $\frac{3}{5}$, of the pizza, so $\frac{2}{5}$, or $\frac{4}{10}$, of it is left.

12. Which fraction is equivalent to $\frac{3}{7}$?

A $\frac{3}{6}$ (B) $\frac{6}{14}$ C $\frac{3}{17}$ D $\frac{7}{7}$

13. **Explain It** Jacqueline had four $5 bills. She bought a shirt for $10. Explain what fraction of her money Jacqueline has left. Use equivalent fractions.

Sample answer: Four $5 bills equal $20. After she spent $10, she had $\frac{10}{20}$, or $\frac{1}{2}$, of her money.

Practice 9-4

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Enrichment
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Number One

Number Sense

Complete the following number sentences so that the answer to each is 1.

1. $\frac{12}{15} - \frac{7}{15} + \frac{10}{15} = 1$
2. $\frac{2}{3} + \frac{2}{3} - \frac{1}{3} = 1$
3. $\frac{25}{20} + \frac{16}{20} + \frac{1}{20} - \frac{22}{20} = 1$
4. $\frac{10}{17} - \frac{3}{17} + \frac{10}{17} = 1$
5. $\frac{2}{25} - \frac{1}{25} + \frac{7}{25} + \frac{17}{25} = 1$
6. $\frac{11}{31} + \frac{6}{31} + \frac{14}{31} = 1$
7. $\frac{19}{100} + \frac{6}{100} + \frac{75}{100} = 1$
8. $\frac{14}{7} - \frac{4}{7} - \frac{3}{7} = 1$
9. $\frac{18}{10} - \frac{2}{10} - \frac{4}{10} - \frac{2}{10} = 1$
10. $\frac{11}{12} + \frac{6}{12} - \frac{5}{12} = 1$
11. $\frac{18}{20} - \frac{6}{20} + \frac{8}{20} = 1$
12. $\frac{5}{23} + \frac{9}{23} + \frac{9}{23} = 1$
13. $\frac{17}{35} + \frac{5}{35} + \frac{20}{35} - \frac{7}{35} = 1$
14. $\frac{15}{29} - \frac{7}{29} + \frac{21}{29} = 1$
15. $\frac{3}{19} - \frac{1}{19} + \frac{7}{19} + \frac{10}{19} = 1$
16. $\frac{7}{13} + \frac{17}{13} - \frac{11}{13} = 1$
17. $\frac{18}{22} + \frac{3}{22} + \frac{1}{22} = 1$
18. $\frac{33}{47} - \frac{8}{47} + \frac{22}{47} = 1$
19. $\frac{106}{90} - \frac{10}{90} - \frac{4}{90} - \frac{2}{90} = 1$
20. $\frac{4}{5} + \frac{5}{5} - \frac{4}{5} = 1$

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