

**Day 4**

**Math 8**



**NTID/SNOW DAY PACKETS**

**ROAD BRANCH ELEMENTARY & MIDDLE SCHOOL**

**Lesson 4.2** Testing Proportional Relationships

Cross-multiply to check each proportion. Circle the ratios that are true.

**a****b****c**

1.  $\frac{4}{3} = \frac{6}{4}$  \_\_\_\_\_

$\frac{1}{4} = \frac{3}{12}$  \_\_\_\_\_

$\frac{4}{5} = \frac{16}{20}$  \_\_\_\_\_

2.  $\frac{8}{12} = \frac{2}{3}$  \_\_\_\_\_

$\frac{30}{25} = \frac{6}{5}$  \_\_\_\_\_

$\frac{7}{3} = \frac{5}{2}$  \_\_\_\_\_

3.  $\frac{9}{1} = \frac{18}{3}$  \_\_\_\_\_

$\frac{15}{4} = \frac{45}{12}$  \_\_\_\_\_

$\frac{2}{5} = \frac{4}{12}$  \_\_\_\_\_

4.  $\frac{7}{4} = \frac{21}{12}$  \_\_\_\_\_

$\frac{9}{2} = \frac{18}{6}$  \_\_\_\_\_

$\frac{5}{6} = \frac{15}{18}$  \_\_\_\_\_

5.  $\frac{5}{9} = \frac{10}{19}$  \_\_\_\_\_

$\frac{4}{3} = \frac{16}{12}$  \_\_\_\_\_

$\frac{7}{4} = \frac{14}{10}$  \_\_\_\_\_

6.  $\frac{12}{8} = \frac{18}{12}$  \_\_\_\_\_

$\frac{14}{7} = \frac{6}{3}$  \_\_\_\_\_

$\frac{1}{5} = \frac{3}{16}$  \_\_\_\_\_

7.  $\frac{2}{1} = \frac{6}{2}$  \_\_\_\_\_

$\frac{8}{6} = \frac{12}{8}$  \_\_\_\_\_

$\frac{5}{4} = \frac{10}{8}$  \_\_\_\_\_

8.  $\frac{2}{5} = \frac{6}{15}$  \_\_\_\_\_

$\frac{14}{6} = \frac{21}{8}$  \_\_\_\_\_

$\frac{4}{5} = \frac{10}{16}$  \_\_\_\_\_

9.  $\frac{3}{5} = \frac{9}{20}$  \_\_\_\_\_

$\frac{1}{3} = \frac{4}{12}$  \_\_\_\_\_

$\frac{9}{6} = \frac{12}{8}$  \_\_\_\_\_

10.  $\frac{7}{5} = \frac{28}{20}$  \_\_\_\_\_

$\frac{5}{4} = \frac{25}{16}$  \_\_\_\_\_

$\frac{10}{13} = \frac{30}{26}$  \_\_\_\_\_

11.  $\frac{4}{5} = \frac{20}{22}$  \_\_\_\_\_

$\frac{1}{5} = \frac{3}{18}$  \_\_\_\_\_

$\frac{6}{7} = \frac{78}{91}$  \_\_\_\_\_

12.  $\frac{2}{9} = \frac{30}{135}$  \_\_\_\_\_

$\frac{8}{3} = \frac{96}{36}$  \_\_\_\_\_

$\frac{5}{2} = \frac{75}{20}$  \_\_\_\_\_

## Lesson 4.2 Testing Proportional Relationships

A **ratio** is a comparison of two numbers. A **proportion** expresses the equality of two ratios.

A ratio can be expressed as 1 to 2, 1:2, or  $\frac{1}{2}$ , and it means that for every 1 of the first item, there are 2 of the other item.

Cross-multiply to determine if two ratios are equal.

$$\frac{2}{4}, \frac{3}{6} \quad 2 \times 6 = 12 \quad 3 \times 4 = 12 \quad \frac{2}{4} = \frac{3}{6}$$

Circle the ratios that are equal. Show your work.

	<b>a</b>	<b>b</b>	<b>c</b>
1.	$\frac{1}{3}, \frac{2}{6}$	$\frac{3}{8}, \frac{1}{4}$	$\frac{3}{5}, \frac{9}{15}$
2.	$\frac{3}{4}, \frac{9}{12}$	$\frac{1}{2}, \frac{4}{8}$	$\frac{5}{6}, \frac{15}{18}$
3.	$\frac{5}{8}, \frac{4}{7}$	$\frac{1}{2}, \frac{1}{4}$	$\frac{4}{3}, \frac{16}{12}$
4.	$\frac{6}{18}, \frac{2}{6}$	$\frac{3}{25}, \frac{6}{50}$	$\frac{1}{8}, \frac{2}{10}$
5.	$\frac{1}{4}, \frac{2}{4}$	$\frac{5}{10}, \frac{3}{6}$	$\frac{4}{24}, \frac{7}{42}$
6.	$\frac{3}{5}, \frac{5}{3}$	$\frac{7}{8}, \frac{21}{24}$	$\frac{8}{23}, \frac{9}{46}$
7.	$\frac{7}{4}, \frac{28}{16}$	$\frac{3}{9}, \frac{1}{3}$	$\frac{16}{20}, \frac{9}{10}$
8.	$\frac{8}{100}, \frac{80}{50}$	$\frac{8}{12}, \frac{10}{14}$	$\frac{15}{20}, \frac{3}{4}$
9.	$\frac{9}{2}, \frac{12}{3}$	$\frac{6}{3}, \frac{8}{4}$	$\frac{1}{3}, \frac{11}{33}$
10.	$\frac{12}{7}, \frac{36}{21}$	$\frac{10}{12}, \frac{15}{20}$	$\frac{3}{4}, \frac{9}{16}$