

# Proportional or Not?

7<sup>th</sup> Grade Math

Name: Key

Are the following examples of proportional relationships? **Explain why.**

1)  $\frac{10}{4} = \frac{50}{20}$

$$10 \cdot 20 = 4 \cdot 50$$
$$200 = 200$$

Yes

2)  $\frac{9}{2} = \frac{14}{3}$

$$9 \cdot 3 = 2 \cdot 14$$
$$27 \neq 28$$

No

3)  $\frac{5}{32} = \frac{3}{20}$

$$5 \cdot 20 = 32 \cdot 3$$
$$100 \neq 96$$

No

4)  $\frac{5}{30} = \frac{2}{12}$

$$5 \cdot 12 = 30 \cdot 2$$
$$60 = 60$$

Yes

5)  $\frac{9}{6} = \frac{12}{8}$

$$9 \cdot 8 = 6 \cdot 12$$
$$72 = 72$$

Yes

6)  $\frac{1}{9} = \frac{8}{30}$

$$1 \cdot 30 = 9 \cdot 8$$
$$30 \neq 72$$

No

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

$$14 \cdot 3 = 6 \cdot 7$$
$$42 = 42$$

Yes

8)  $\frac{11}{5} = \frac{9}{4}$

$$11 \cdot 4 = 5 \cdot 9$$
$$44 \neq 45$$

No

9) At a hot air balloon festival in Albuquerque, New Mexico a balloon takes off and rises 100 ft per minute.

$$\frac{1}{100} = \frac{2}{200}$$

$$1 \cdot 200 = 100 \cdot 2$$
$$200 = 200$$

Yes

$$\frac{4}{400} = \frac{10}{1,000}$$

$$4 \cdot 1,000 = 400 \cdot 10$$
$$4,000 = 4,000$$

Yes

10) When Bill first dug his pond, he put 5 fish in it. Since then the population has tripled every year.

$$\frac{1}{15} = \frac{2}{45}$$

$$1 \cdot 45 = 15 \cdot 2$$
$$45 \neq 30$$

- 11) You go to the store and buy apples for \$3 per pound.

$$\frac{1}{3} = \frac{2}{6}$$

$$1 \cdot 6 = 3 \cdot 2$$

$$6 = 6$$

yes

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

$$5 \cdot 18 = 15 \cdot 6$$

$$90 = 90$$

yes

- 12) A company called "Better Building Supplies" will deliver sand to any construction location. They charge \$25 for delivery and \$19 for each ton.

$$\frac{1}{44} = \frac{2}{63}$$

$$1 \cdot 63 = 44 \cdot 2$$

$$63 \neq 88$$

No

- 13) A student is capable of earning a 100% on his math test, but his score gets cut in half for each 5 hours spent playing video games.

$$\frac{5}{50} = \frac{10}{25}$$

$$5 \cdot 25 = 50 \cdot 10$$

$$125 \neq 500$$

No

- 14) Taylor and her mom have worked out a "pay system" for the grades she earns this semester on her report card. If Taylor gets 1 A on her report card, she will earn \$20. For every A after the first, the amount of money she receives doubles.

$$\frac{1}{20} = \frac{3}{140}$$

$$1 \cdot 140 = 20 \cdot 3$$

$$140 \neq 60$$

No