

Please solve in your spiral

Proportional and Nonproportional Relationships

$$\frac{3}{5} \quad \frac{5}{7} \quad \frac{7}{9} \quad \frac{9}{11}$$

1. The National Weather Service has a Wind Chill Temperature (WCT) index. The table shows how cold people and animals feel when the temperature outside is 20°F. Determine whether the set of numbers in the pattern forms a proportion.

Wind Chill (°F)	13	9	6	4
Wind (mph)	5	10	15	20

$$\frac{13}{5} \neq \frac{6}{15}$$

$$\frac{13}{5} = \frac{39}{15}$$

2. The table shows the coverage for a brand of interior paint when it is applied on primed walls. Determine whether the set of numbers in the pattern forms a proportion.

Paint (gal)	1	2	3	4
Area (square ft)	360	720	1080	1440

$\frac{\text{AREA}}{\text{PAINT}} = \frac{360}{1}$
 $\frac{720}{2} = \frac{360}{1}$
 $\frac{1440}{4} = \frac{360}{1}$
 $\frac{1080}{3} = \frac{360}{1}$

$\frac{\text{DEP}}{\text{IND}} = \frac{P}{Q} = \frac{IND}{Q}$

UNIT RATE
 CONSTANT OF PROPORTIONALITY 360

3. A school is repainting some of its classrooms. Each classroom is repainted with 5.5 gallons of paint. Write and solve an equation to determine the gallons of paint the school must purchase if they repaint 18 classrooms.

$$5.5(18) = 99 \text{ GAL}$$

4. Gwen bought $3\frac{1}{4}$ yards of fabric for \$16.22. Write and solve an equation to determine how much 12 yards would cost.

$$\frac{3\frac{1}{4} \text{ YRDS}}{\$16.22}$$

$$\frac{\$16.22}{3\frac{1}{4}} = \frac{\$16.22}{3.25} = \frac{\$4.99}{1}$$

$$\$4.99(12) = \$59.88$$

$$\$16.22 \div 3.25$$

$$6 \text{ PK OF DP} = \$5.30 \quad \frac{\$5.30}{6} = \$0.88$$

$$8 \text{ PK OF H}_2\text{O} = \$6.85 \quad \frac{\$6.85}{8} = \$0.82$$