

Coloring Ratios – Apprentice

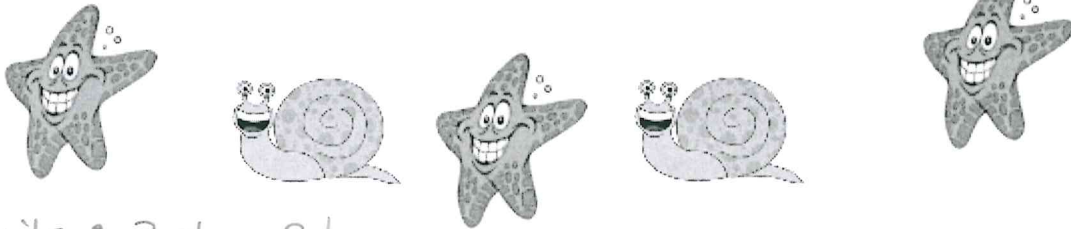
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Learning Goals:

1. I will be able to understand and use two and three term ratios in word problems
2. I will be able to make equivalent ratios
3. I will be able to compare ratios

Learning Goal #1: Ratios

1. Write two ratios from the below picture, making sure you identify each ratio.



2 snails : 3 starfish

2 snails : 5 total sea creatures

3 starfish : 5 total sea creatures

2. The ratio of cats to dogs to hamsters is 24:8:12. Put this in lowest terms

$$\frac{24}{\div 4} : \frac{8}{\div 4} : \frac{12}{\div 4} = 6 : 2 : 3$$

3. The ratio of soccer balls to basketballs to baseballs is 2:3:4. If there are 12 basketballs, how many soccer balls are there? Show your work.

soccer : basketball : baseball

$$\frac{2}{\times 4} : \frac{3}{\times 4} : \frac{4}{\times 4} = 8 : 12 : 16$$

Learning Goal #2: Equivalent Ratios

1. List four equivalent ratios for 5:12

a. $\frac{10}{\quad} : \frac{24}{\quad}$

b. $\frac{15}{\quad} : \frac{36}{\quad}$

c. $\frac{20}{\quad} : \frac{48}{\quad}$

d. $\frac{25}{\quad} : \frac{60}{\quad}$

answers will vary

2. There are 26 students in the 8-3 class. The ratio of boys to girls is 6:7. How many boys are there? Show your work?

$$\frac{\text{boys}}{\text{total}} = \frac{6 \times 2}{13 \times 2} = \frac{12}{26}$$

There are 12 boys in the class.

3. Xavier makes almond bark for Christmas treats. The recipe calls for 1 cup almonds for every 2 cups chocolate. Jacob uses $1\frac{1}{2}$ cups almonds. How many cups of chocolate does he need to use? Show your work...

Almonds : Chocolate

$$\frac{1}{x1.5} : \frac{2}{x1.5} = 1.5 : 3$$

3 cups of Chocolate.

Learning Goal #3: Comparing Ratios

1. Make the following ratio with the first term "1"

a. $4:12 \rightarrow \underline{1 : 3}$

b. $5:9 \rightarrow \underline{1 : 1.8}$

c. $2:7 \rightarrow \underline{1 : 3.5}$

d. $3:20 \rightarrow \underline{1 : 6.7}$

2. In a basketball game, Gurshan made 6 of 11 free shots. Lovlesh made 3 of 7. Who had more free shots? Explain your answer:

$$\frac{6 \times 7}{11 \times 7} \quad \frac{3 \times 11}{7 \times 11} = \frac{42}{77} \quad \frac{33}{77}$$

Gurshan's ratio was better

3. In the Grade 7 population at SMS there are 4 skiers for every 7 snowboarders. In the grade 8 population at SMS there are 5 skiers for every 9 snowboarders. Which group has a larger population of skiers? Explain your answer:

Gr 7 $\frac{4}{x9} : \frac{7}{x9} = 36 : 63$

Gr 8 $\frac{5}{x7} : \frac{9}{x7} = 35 : 63$

Grade 7's had a larger ratio of skiers.

4. In the 8-3 class there is a ratio of 4 girls for every 5 boys. In the 8-2 classroom there is a ratio of 3 girls for every 4 boys. Which class has the higher male population? Explain your answer:

$$\frac{5 \times 7}{9 \times 7} \quad \frac{4 \times 9}{7 \times 9} = \frac{35}{63} \quad \frac{36}{63}$$

8-2's have a higher ratio of boys.

5. In the hockey skills competition Sidney Crosby scored on 5 of his 7 shots. Henrik Sedin scored on 6 of his 8 shots. Whose performance was better? Explain your answer:

$$\frac{5 \times 8}{7 \times 8} \quad \frac{6 \times 7}{8 \times 7} = \frac{40}{56} \quad \frac{42}{56}$$

Henrik Sedin's ratio was higher