

Name: Key

Date: 11/2/2020 Period: All

Ratio Applications

part to total

$$\begin{array}{r} 135 \\ \times 3 \\ \hline 105 \end{array}$$

1. At a local middle school, there is a ratio of 3 boys to every 4 girls. If there are 245 total students enrolled, then how many are boys?

Boys	3	X = 105
Tot.	3+4=7	245

$$7 \overline{)245} \begin{array}{r} 35 \\ -21 \\ \hline 35 \\ -35 \\ \hline 0 \end{array}$$

part to total

2. Sam's Steakhouse has a waiter to cook ratio of 5 to 2. The total number of waiters and cooks is 42. How many waiters does Sam's Steakhouse employ?

waiters	5	X = 30
Staff	5+2=7	42

part to part

3. A set of angles has a ratio of 5:2. If the larger angle measures 105°, then what is the measure of the smaller angle?

L	5	105
S	2	X = 42°

4. Jamie is a receptionist at a law firm. She books 36 appointments each day. Four out of every 24 appointments are cancelled. How many appointments are cancelled each day?

~~F. 4~~  
 G. 6  
~~H. 8~~  
~~J. 10~~

Cancel	4	X
Appt	24	36

$$\frac{4}{24} \div \frac{4}{4} = \frac{1}{6}$$

$$\frac{1}{6} = \frac{X}{36}$$

5. Solve for each x.

$$\frac{6}{9} = \frac{72}{x} \quad | \quad \frac{13}{7} = \frac{x}{49} \quad | \quad \frac{180}{90} = \frac{x}{15}$$

~~A. 96, 91, 60~~  
~~B. 96, 104, 60~~  
 C. 108, 91, 30  
~~D. 108, 104, 60~~

6. A florist uses 160 sunflowers to make 5 identical flower arrangements. How many sunflowers would the florist use to create 8 identical arrangements?

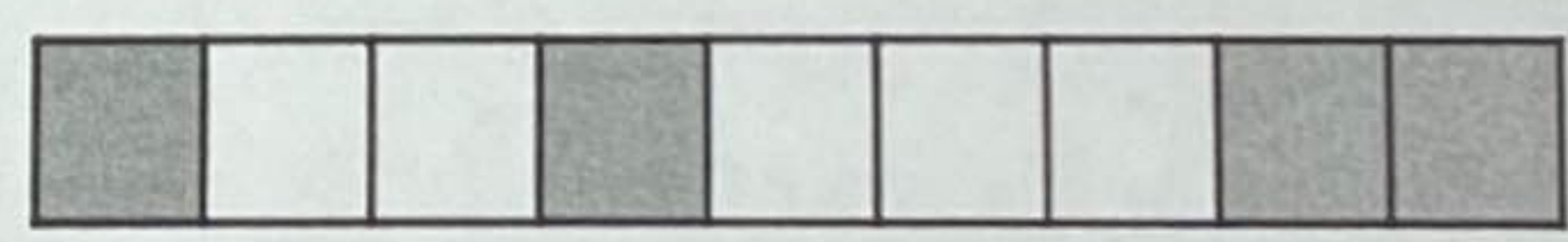
~~F. 250 sunflowers~~  
 H. 256 sunflowers  
~~G. 254 sunflowers~~  
~~J. 260 sunflowers~~

$$\frac{160}{5} = \frac{X}{8}$$

7. In the high school marching band there are 2 percussionists on the sidelines to every 13 instruments on the field. If there are 150 total members in the band, then how many percussionists are on the sidelines?

~~A. 10~~  
 B. 20  
~~C. 30~~  
~~D. 40~~

8. The model below shows the ratio of gray to white squares. Which of the following is NOT an equivalent ratio of gray squares to white squares?



~~F.  $\frac{8}{10} \div \frac{2}{2} = \frac{4}{5}$~~   
 H.  $\frac{36}{48} \div \frac{12}{12} = \frac{3}{4}$   
~~G.  $\frac{24}{30} \div \frac{6}{6} = \frac{4}{5}$~~   
~~J.  $\frac{20}{25} \div \frac{5}{5} = \frac{4}{5}$~~   
 G  $\frac{4}{5}$   
 W  $\frac{5}{5}$