NAME: _____ SERVISS

GRADE 9: *Fractions, Ratios, Proportions & Percents Review*

1. Change to *improper form*:

a) $3\frac{2}{5}$ **b)** $4\frac{7}{11}$

2. Reduce to lowest terms:

a) $\frac{15}{27}$ **b)** $\frac{72}{48}$

3. Complete the following equivalent fractions:

a) $\frac{5}{11}=\frac{}{88}$ **b)** $\frac{8}{15}=\frac{16}{}=\frac{}{90}$

4. Simplify:

a) $2\frac{1}{2}\times\frac{7}{10}$ **b)** $5\frac{1}{4}\div 3$ **c)** $1\frac{5}{6}\times 2\frac{3}{4}$ **d)** $3\frac{3}{4}\div\frac{2}{5}$

e) $3\frac{4}{5}+1\frac{2}{3}$ **f)** $9\frac{3}{8}-1\frac{5}{6}$ **g)** $\left(5\frac{4}{5}-1\frac{3}{4}\right)\div 2\frac{1}{4}$ **h)** $4\frac{1}{6}+2\frac{3}{4}\times 1\frac{2}{3}$

5. Harry spends $\frac{1}{3}$ of his day sleeping and $\frac{1}{4}$ of his day at school. What fraction of the day does he have left for other activities?

6. Write each ratio in simplest form.

a) $\frac{35}{28}$ **b)** 9 to 54 **c)** 15 : 40 : 25 **d)** 18 hours to 3 days

7. Solve for the variable(s):

a) $10:6=x:24$ **b)** $\frac{12}{9}=\frac{x}{15}$ **c)** $8:7:4=12:x:y$

8. Complete the following chart:

FRACTION	DECIMAL	PERCENT
$\frac{5}{8}$		
	0.85	
		103%
	0.005	

9. Mustard and sauerkraut are mixed together in the ratio 3:5 to make a special Oktoberfest sauce for sausages.

a) If 27 L of mustard are used in the sauce, how much sauerkraut is needed?

b) How much of each ingredient is needed to make 84 L of the sauce?

10. Frank, Jennifer and Lola bought one pair of season's tickets for the Raptors. They divided the cost in a ratio of 5 : 7 : 6, according to the number of games each plans to attend. The total cost of the tickets is $3060. How much should each pay?

11. The regular price of an IPhone was $230. It was sold at a discount of 10%.

a) What was the sale price?

b) Assuming taxes are 13% of the sale price, what is the final price after taxes?

12. A dealer bought a used car for $6600. This represents 60% of the price he eventually sold the car for. How much did he sell it for?

Answers:

1a) $\frac{17}{5}$ b) $\frac{51}{11}$

2a) $\frac{5}{9}$ b) $\frac{3}{2}$

3a) 40 b) 30 and 48

4a) $\frac{7}{4}$ b) $\frac{7}{4}$ c) $\frac{121}{24}$ d) $\frac{75}{8}$ e) $\frac{82}{15}$ f) $\frac{181}{24}$
g) $\frac{9}{5}$ h) $\frac{35}{4}$

5. $\frac{5}{12}$ 6a) $\frac{5}{4}$ b) 1 to 9 c) 3:8:5 d) 1 hour to 4 hours

7a) x = 40 b) x = 20 c) x = 10.5, y = 6

8. $\frac{5}{8}$, 0.625, 62.5%
$\frac{17}{20}$, 0.85, 85%
$\frac{103}{100}$, 1.03, 103%
$\frac{1}{200}$, 0.005, 0.5%

9a) 45 L b) 31.5L of mustard, 52.5L of sauerkraut

10. Frank should pay $850, Jennifer should pay $1190, Lolay should play $1020

11a) $207 b) $233.91

12. $1100