Year 8 Worksheet 5: Fractions and percentages

Question 1: Answer the following.

1	Over the weekend, 6000 motorists were stopped by police and tested for drunk driving. Of these, 3.5% were charged with an offense. How many motorists were charged? A) 105 B) 210 C) 350 D) 315
2	The marked price of a computer is $1200. Sarah buys the computer on sale for $960. Calculate the percentage discount. A) 15% B) 20% C) 25% D) 30%
3	What is $3\frac{4}{7}$ as an improper fraction? A) 19/4 B) 15/7 C) 29/4 D) 25/7
4	Find 8.5% of $9600. A) $816 B) $8160 C) $816.00 D) $81.60
5	Emily's salary of $900 is increased by 7%. What is her new salary? A) $945 B) $963 C) $855 D) $970

6	A salesperson earns a 4.25% commission for selling a $350,000 house. Calculate their commission.
	A) $14,875 B) $14,875.00 C) $1487.50 D) $1487.50
7	Evaluate 1/2 + 2/3.
	A) 7/6 B) 1/6 C) 3/5 D) 1/5
8	A pair of shoes costs $120, including 8% sales tax. What is the sales tax amount?
	A) $10.40 B) $8.60 C) $9.60 D) $11.20
9	Find 3 1/2% of $450.
	A) $13.50 B) $15.75 C) $15.00 D) $16.50
10	Mark bought a bicycle for $300 and resold it for $240. What is his loss as a percentage of the selling price?
	A) 20% B) 25% C) 15% D) 10%

Question 2: Answer the following.

1	A store offers a 20% discount on a $50 shirt. How much money will you save if you buy the shirt?
2	Sarah scored 75% on her science exam, which had 40 questions. How many questions did she answer correctly?
3	A recipe requires 2/3 of a cup of sugar, but you want to make 1.5 times the recipe. How many cups of sugar do you need?
4	If 40% of a pizza has been eaten, what fraction of the pizza remains uneaten?
5	In a survey, 60% of the respondents preferred chocolate, 25% preferred vanilla, and the rest preferred strawberry. What percentage of respondents preferred strawberries?

6	A car rental agency charges $40 per day plus an additional 10% tax. If you rent the car for 5 days, what is the total cost, including tax?
7	In a jar, there are 25 red marbles, 30 blue marbles, and 45 green marbles. What fraction of the marbles are not red?
8	If 35% of a recipe is for nuts and 20% is for chocolate chips, what fraction of the recipe is not nuts or chocolate chips?
9	A salesperson earns a 5.5% commission on sales. If they sell a product for $800, how much is their commission in decimal form?
10	In a survey, 70% of the respondents said they liked pizza, and 50% said they liked burgers. If 30% liked both pizza and burgers, what percentage of the respondents didn't like either?

Question 3: Answer the following.

1	A store offers a 20% discount on a $150 jacket. What is the final price, expressed as a fraction of the original price?
2	A recipe calls for 1.5 cups of sugar, but you want to make only half of the recipe. How much sugar, in percentage, do you need compared to the original recipe?
3	In a school, 1/4 of the students are in the chess club, and 2/5 of the students also participate in the math club. What fraction of the students are NOT in both clubs?
4	A computer was initially priced at $800 but was marked up by 25%. What is the final price of the computer?

5	In a bakery, 60% of the pastries are croissants, and 1/3 of those croissants are almond-filled. What fraction of the pastries are almond-filled croissants?
6	A garden is divided into three sections. One section covers 40% of the garden, another covers 1/5, and the third covers 3/10. What fraction of the garden remains unallocated?
7	If you receive a 15% tip on a restaurant bill, and the bill is $60. How much is the tip in dollars? How much does the bill include tips?
8	A discount store offers a 30% discount on all items. If you buy an item originally priced at $120, how much will you pay after the discount?

9	In a survey, 2/5 of the respondents said they prefer tea, 1/4 prefer coffee, and the rest prefer neither. What fraction of the respondents prefer neither tea nor coffee?
10	In a class of 40 students, 60% are girls, and 40% are boys. If 25% of the girls and 15% of the boys play a musical instrument, how many students in total play a musical instrument?

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Answer Key

Question 1: Answer the following.

1	Over the weekend, 6000 motorists were stopped by police and tested for drunk driving. Of these, 3.5% were charged with an offense. How many motorists were charged? A) 105 B) 210 C) 350 D) 315 Answer: B) 210
2	The marked price of a computer is $1200. Sarah buys the computer on sale for $960. Calculate the percentage discount. A) 15% B) 20% C) 25% D) 30% Answer: B) 20%
3	What is $3\frac{4}{7}$ as an improper fraction? A) 19/4 B) 15/7 C) 29/4 D) 25/7 Answer: D) 25/7
4	Find 8.5% of $9600. A) $816 B) $8160 C) $816.00 D) $81.60 Answer: A) $816
5	Emily's salary of $900 is increased by 7%. What is her new salary? A) $945 B) $963 C) $855 D) $970

	Answer: B) $963
6	A salesperson earns a 4.25% commission for selling a $350,000 house. Calculate their commission. A) $14,875 B) $14,875.00 C) $1487.50 D) $1487.50 Answer: A) $14,875
7	Evaluate 1/2 + 2/3. A) 7/6 B) 1/6 C) 3/5 D) 1/5 Answer: A) 7/6
8	A pair of shoes costs $120, including 8% sales tax. What is the sales tax amount? A) $10.40 B) $8.60 C) $9.60 D) $11.20 Answer: C) $9.60
9	Find 3 1/2% of $450. A) $13.50 B) $15.75 C) $15.00 D) $16.50 Answer: B) $15.75
10	Mark bought a bicycle for $300 and resold it for $240. What is his loss as a percentage of the selling price? A) 20% B) 25% C) 15% D) 10% Answer: A) 20%

Question 2: Answer the following.

1	Answer: You will save $10.
2	Answer: Sarah answered 30 questions correctly.
3	Answer: You need 1 cup of sugar.
4	Answer: 60% of the pizza remains uneaten, which is 3/5 in fraction form.
5	Answer: 15% of the respondents preferred strawberry.
6	Answer: The total cost, including tax, is $220.
7	Answer: 75% of the marbles are not red, which is 3/4 in fraction form.
8	Answer: 45% of the recipe is not nuts or chocolate chips, which is 9/20 in fraction form.
9	Answer: Their commission is $44.
10	Answer: 10% of the respondents didn't like either pizza or burgers.

Question 3: Answer the following.

1	Answer: The final price is $120 that is 4/5 of the original price.
2	Answer: You need 0.75 cups that is 1/2 of the original amount of sugar. So, when making half of the recipe, you need 50% of the sugar compared to the original recipe.
3	Answer: 7/20 of the students are NOT in both clubs.
4	Answer: The final price is $1000.
5	Answer: Fraction of almond-filled croissants = Fraction of croissants * Fraction almond-filled = (60/100) * (1/3) = (3/5) * (1/3) = 3/15 = 1/5 1/5 of the pastries are almond-filled croissants.
6	Answer: 1/10 of the garden remains unallocated.
7	Answer: The tip is $9. Bill is $69
8	Answer: You will pay $84, which is 0.7 times the original price.
9	Answer: Fraction who prefer neither = 1 - (Fraction who prefer tea + Fraction who prefer coffee) Fraction who prefer neither = 1 - (8/20 + 5/20) = 7/20 7/20 of the respondents prefer neither tea nor coffee.
10	Answer: In a class of 40 students, 60% are girls (0.60 * 40 = 24 girls), and 40% are boys (0.40 * 40 = 16 boys). If 25% of the girls (0.25 * 24 = 6 girls) and 15% of the boys (0.15 * 16 = 2.4 boys) play a musical instrument, we consider the whole numbers: Total students who play a musical instrument = 6 girls + 2.4 boys = 8.4 students. Round up, so9 students in total play a musical instrument.