Mental Math

Grade 9 Mathematics (10F)

H–1

Substrand: Chance and Uncertainty **Specific Learning Outcome: 9.SP.4**

General Questions	Answers
1. Evaluate: $5 + 3 \times 2$	11
2. How much do you save if the price of a $42 hockey stick is reduced by 20%?	$8.40
3. How many bags that hold 5 apples each could you fill with 325 apples?	65 bags
4. What is Robert's grade point average if he received 60% in mathematics, 50% in French, and 70% in social studies?	60%
5. Multiply: 25×11	275
6. Louis Saint-Laurent became prime minister of Canada in 1948 at the age of 66. In what year was he born?	1882
Unit Questions	
7. When tossing a coin, what is the probability of it showing heads?	$\frac{1}{2}$ or 0.5
8. What is the probability of rolling an even number with a normal, six-sided die?	$\frac{3}{6}$ or 0.5
9. What is the probability of rolling a 3 with a normal, six-sided die?	$\frac{1}{6}$
10. If 70 people have green eyes out of a group of 200, what is the probability of choosing a person with green eyes from the group?	35% or 0.35
Other Questions	
11.	
12.	

Mental Math

Grade 9 Mathematics (10F)

H–2

Substrand: Chance and Uncertainty **Specific Learning Outcome: 9.SP.4**

General Questions	Answers
1. Sarah was absent 20% of the time over the past 15 days. How many days did she miss over the course of this period?	3 days
2. Evaluate: (2)(2)(2)(2)(2) + 2	34
3. What is the sale price of a $25 shelf reduced by 20%?	$20
4. On one assignment, 15 out of 20 students used a calculator when they did their homework. What fraction of students does this represent?	$\frac{3}{4}$
5. If you work 20 hours at an hourly wage of $11, what is your total revenue earned?	$220
6. Multiply: $\frac{3}{8} \times \frac{5}{2}$	$\frac{15}{16}$
Unit Questions	
7. Write the probability of rolling a 2 or a 5 with a normal, six-sided die.	$\frac{2}{6}$ or $\frac{1}{3}$
For questions 8 to 10, use the statement, "Out of the fifty cars parked in the parking lot, twenty are white."	
8. What is the probability of a car on the road being white?	$\frac{2}{5}$ or 0.40
9. Is it a theoretical probability or an experimental probability?	experimental
10. What percent of cars in the parking lot are not white?	60%
Other Questions	
11.	
12.	

Mental Math

Grade 9 Mathematics (10F)

H–3

Substrand: Chance and Uncertainty **Specific Learning Outcome: 9.SP.4**

General Questions	Answers
1. Evaluate: $17 \times 2 + 150$	184
2. The altitude of Volcano Guallatiri in Chili is 6060 m. Express this altitude in km.	6.06 km
3. How many days are there from July 1st to September 30th?	92 days
4. Write the expression that corresponds to 5 less than x.	$x - 5$
5. Which is the better price per ticket: 5 concert tickets for \$50 or 4 concert tickets for \$38?	4 for \$38
6. Estimate the GST (5%) on a purchase of \$79.	$\approx$ \$4.00
Unit Questions	
The kids from a community centre choose either soccer or baseball. Here are the results of their registrations.	

	Soccer	Baseball
Girls	15	35
Boys	30	20

7. How many kids are registered in total from the community centre?	100 kids
8. What is the theoretical probability of a random soccer registration being a girl?	50%
9. What is the experimental probability of a community centre girl playing soccer?	30%
10. What is the experimental probability of a community centre kid playing soccer?	45%
Other Questions	
11.	
12.	

Mental Math

Grade 9 Mathematics (10F)

H–4

Substrand: Chance and Uncertainty **Specific Learning Outcome: 9.SP.4**

General Questions	Answers
1. Evaluate: $24 + (7 \times 4)$	52
2. Add the number of days in a leap year with the number of days in a non-leap year.	731 days
3. If you pay a bill of $8.88 with a $20 bill, how much change will you get back?	$11.12
4. What is the area of a volleyball court that measures 9 m by 40 m?	360 m^2
5. A badminton racquet that regularly costs $82 is being sold for $41. What is the percentage of the price reduction?	50%
6. What number satisfies the equation $8 + m = -3$?	$m = -11$
Unit Questions	
There are three students running for student council president in an election: Kyle, Scott, and Laura. If 300 students voted and 40% chose Kyle, 30% chose Scott, and the rest chose Laura, then	
7. what is the theoretical probability of choosing Scott if votes are random?	$\frac{1}{3}$ or $33.\overline{3}\%$
8. how many students chose Laura?	90 students
9. how many students did not choose Kyle?	180 students
10. what is the experimental probability that a student chose Scott?	30% or $\frac{3}{10}$
Other Questions	
11.	
12.	

Mental Math

Grade 9 Mathematics (10F)

H–5

Substrand: Chance and Uncertainty **Specific Learning Outcome: 9.SP.4**

General Questions	Answers
1. One-quarter of 20 students from your gym class did not have their gym shoes in the last class. What percentage of students does this represent?	25%
2. What is the perimeter of a rectangular lot that measures 60 m by 200 m?	520 m
3. Estimate the value of $\sqrt{6420}$.	≈ 80
4. Calculate a tip of 10% on a bill of $64.40?	$6.44
5. How many millimetres are equal to 32.6 cm?	326 mm
6. One day, Jonah painted $\frac{1}{4}$ of his kitchen. The next day, he painted another quarter of his kitchen. What fraction of his kitchen still needs to be painted?	$\frac{1}{2}$
Unit Questions	
7. A baseball player obtained 9 hits on 27 attempts at bat. Express his probability to the nearest thousandth.	0.333
8. You throw a nickel ten times and you receive heads 7 out of 10 times. This is an example of _____ probability.	experimental
9. What is the theoretical probability of flipping heads when a nickel is thrown 10 times?	5 out of 10 or $\frac{1}{2}$
10. When tossing a coin, what can be done to have the experimental probability more reliably approximate the theoretical probability?	increase the number of tosses
Other Questions	
11.	
12.	

Mental Math

Grade 9 Mathematics (10F)

H–6

Substrand: Chance and Uncertainty **Specific Learning Outcome: 9.SP.4**

General Questions	Answers
1. How many packages containing 3 boxes of juice would you have to buy to give one box to each of 210 people?	70 packages
2. Add: $\frac{1}{2} + \frac{1}{3}$	$\frac{5}{6}$
3. There are 25 chickens and 20 rabbits on a farm. How many legs are there?	130 legs
4. If you buy a shirt for $24 and a pair of pants for $38, what is the total amount of your purchase?	$62
5. How many kilometres are equivalent to 41 200 m?	41.2 km
6. What is the next number: 51, 46, 41, 36, ___?	31
Unit Questions	
7. Why is it more probable for someone's birthday to be in January than in February?	There are more days in January.
8. All probabilities can be represented as decimal numbers between ___ and ___.	0 and 1
9. The lotto 649 gives a probability of $\frac{1}{200}$ to win $100. The lotto MAX gives a probability of $\frac{1}{175}$ to win $100. Which lotto gives you a better chance to win?	lotto MAX
10. What is the probability of an event that you are certain will happen?	1 or 100%
Other Questions	
11.	
12.	