

# Mental Math

F-1

## Grade 12 Essential Mathematics (40S)

Unit F: Statistics

Specific Learning Outcome: 12.E5.S.1

General Questions	Answers
1. What is the median of the following list of numbers? 4, 5, 7, 9, 10, 12	8
2. Evaluate: $12 + 3 - 5 + 3 + 53$	66
3. Which two terms are the same value? $6, 4, \frac{18}{6}, \frac{18}{3}, \frac{18}{2}, \frac{8}{3}$	6 and $\frac{18}{3}$
4. Beth spends 60% of her monthly income on household expenses, including groceries. Of her remaining income, she puts 50% into savings. If Beth's monthly income is \$3400, how much money does she have left after groceries and savings?	\$680
5. What is one-half of $\frac{1}{7}$ ?	$\frac{1}{14}$
Unit Questions	
Use the following set of data to answer questions 6 to 8. Data: 8, 8, 9, 10, 12, 13	
6. Find the mean for the set of data above.	10
7. Find the median for the set of data above.	9.5
8. Find the mode for the set of data above.	8
Other Questions	
9.	
10.	

# Mental Math

F-2

## Grade 12 Essential Mathematics (40S)

Unit F: Statistics

Specific Learning Outcome: 12.E5.S.1

### General Questions

	Answers
1. Estimate the product: $39.2 \times 78.9$	3200
2. Complete the pattern: 7, 5, 3, 1, -1, _____, _____	-3, -5
3. What is the total cost of a lunch if the sandwich costs \$4.95, a salad costs \$5.65, and a drink costs \$2.50?	\$13.10
4. A manager at a community centre wants to supply hot dogs as a treat for the members. The manager estimates that 120 people will attend and eat three hot dogs each. How many hot dogs does the community centre need to prepare?	360
5. You are buying a new fall wardrobe. You want to purchase five pairs of \$50 jeans, two \$30 sweaters, and seven \$25 shirts. How much will you spend on your fall wardrobe (excluding tax)?	\$485.00

### Unit Questions

6. Remove the outlier and calculate the <b>mean</b> for the remaining data: 10, 10, 11, 15, 19, 40	13
7. Remove the outlier and calculate the <b>median</b> for the remaining data: 17, 18, 20, 20, 22, 27, 29, 31, 67	21
8. To find the 10% trimmed mean of the following data set, which numbers would you remove? (The data set has 20 values.) 1, 4, 6, 6, 8, 10, 12, 12, 14, 14, 15, 17, 18, 18, 19, 22, 23, 23, 40, 70	1 and 70

### Other Questions

9.	
10.	

# Mental Math

F-3

## Grade 12 Essential Mathematics (40S)

### Unit F: Statistics

Specific Learning Outcome: 12.E5.S.1

General Questions	Answers
1. What is the lowest common multiple of 6 and 8?	24
2. Evaluate: $3^3$	27
3. How many millimetres are equal to 14.1 m?	14 100 mm
4. In a standard deck of 52 cards, what is the probability that you will draw a red card?	$\frac{1}{2}$
5. Evaluate: $\frac{1}{2} - \frac{9}{32}$	$\frac{7}{32}$
Unit Questions	
Use the following information to answer questions 6 to 8. Kamal just received her marks for her first year at university. <ul style="list-style-type: none"><li>■ Introduction to Western Civilization: 2.6</li><li>■ Linear Algebra: 3.0</li><li>■ English Composition: 3.5</li><li>■ Calculus: 3.3</li><li>■ Introduction to Ancient Roman Culture: 2.6</li></ul>	
6. What is Kamal's grade-point average (GPA)?	3.0
7. If Introduction to Western Civilization and Introduction to Ancient Roman Culture are both half-credit courses, calculate Kamal's weighted GPA.	3.1
8. If Linear Algebra was the only half-credit course, calculate Kamal's weighted GPA.	3.0
Other Questions	
9.	
10.	

# Mental Math

F-4

## Grade 12 Essential Mathematics (40S)

Unit F: Statistics

Specific Learning Outcome: 12.E5.S.1

### General Questions

1. Evaluate:  $5 \times 17 \times 20$
2. You went to the grocery store to pick up a few items. The total came to \$21.37. You gave the cashier \$40. What should your change be?
3. How many days are in 15 weeks?
4. In the months of November, December, and January, it snowed 14 mm, 60 mm, and 76 mm respectively. What is the mean amount of snow that fell each month?
5. Complete the pattern: 7, 14, 21, 28, \_\_\_\_\_, \_\_\_\_\_

### Answers

1700

\$18.63

105

50 mm

35, 42

### Unit Questions

Use the following set of data to answer questions 6 to 8.

Data: 61, 50, 70, 69, 50

6. What is 35 more than the median?
7. What is the mode times 4?
8. What is the mean?

96

200

60

### Other Questions

9.

10.

# Mental Math

F-5

## Grade 12 Essential Mathematics (40S)

### Unit F: Statistics

### Specific Learning Outcome: 12.E5.S.2

General Questions	Answers
1. Calculate the mortgage if Carmen bought a house for \$210,000 and had a down payment of \$32,000.	\$178,000
2. Solve for $x$ : $\frac{(x + 5)}{6} = 7$	37
3. Calculate 75% of 2300.	1725
4. What is the sum of the digits from 1 to 10?	55
5. Marcel is getting ready for school in September. He bought a binder for \$11.46, pens for \$6.26, and pencils for \$3.67. Estimate how much Marcel spent on school supplies.	≈ \$21
Unit Questions	
Use the information below to answer questions 6 to 8. $N$ = the total number of scores in the sample $b$ = the number of scores below a given score Percentile Rank = $\frac{b}{N} \times 100$	
6. Your test mark is 65% and three other people in your class of 50 students have the same mark as you. There are 30 people with a lower test mark than you. What is your percentile rank?	60th
7. Your test mark is 83% and one other person in your class of 25 has the same mark as you. There are three people with a <b>higher</b> test mark than you. What is your percentile rank?	80th
8. Your test mark is 62% and nobody else in your class of 20 students has your same mark. There are four people with a <b>higher</b> mark. What is your percentile rank?	75th
Other Questions	
9.	
10.	

