

Final Exam Math-1332
Fall---2019

Name _____

Date-----

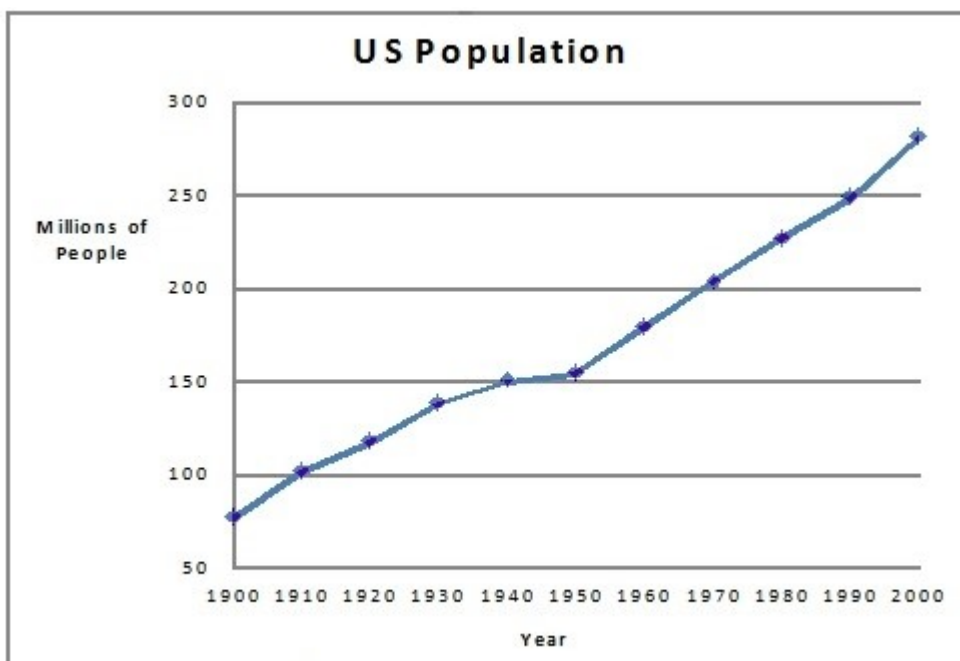
MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- 1) A coat was reduced from \$250 to \$200. Find the percent decrease. 1) _____
A) 0.8% B) 20% C) 1.25%
- 2) Convert the following using dimensional analysis. 2) _____
81 inches to feet
A) $6\frac{3}{4}$ ft B) 962 ft C) 6.9 ft D) 972 ft
- 3) As part of her retirement planning, Mrs. Campbell purchases an annuity that pays 9.5% compounded quarterly. If the quarterly payment is \$3,500, how much will Mrs. Campbell have saved in 5 years? 3) _____
A) \$88,269.62 B) \$88,389.99 C) \$88,340.37 D) \$88,289.87
- 4) Solve the proportion. $\frac{3}{x-1} = \frac{7}{x+2}$ 4) _____
A) $\frac{13}{4}$ B) $\frac{1}{4}$ C) $\frac{3}{4}$ D) 4
- 5) Which statement is false? 5) _____
A) $a \in \{a, b, c\}$ B) $\emptyset \subseteq \{a, b, c\}$ C) $\emptyset \in \{a, b, c\}$ D) $\emptyset \subset \{a, b, c\}$
- 6) Express $8\frac{1}{5}\%$ as a mixed number or a fraction. 6) _____
A) $\frac{41}{50}$ B) $\frac{41}{500}$ C) $\frac{41}{100}$ D) $\frac{41}{10}$
- 7) Find the future value of the loan. 7) _____
 $P = \$13,200, r = 6.5\%, t = 2$ months
A) \$13,339.27 B) \$13,343.00 C) \$14,677.30 D) \$14,673.20
- 8) Convert the unit of capacity. 8) _____
3 pt = _____ fl oz
A) 12 fl oz B) 6 fl oz C) 48 fl oz D) 24 fl oz
- 9) In a survey of 29 instructors, it was found that 22 liked whiteboards, 11 liked blackboards, and 7 liked both. How many instructors did not like whiteboards? 9) _____
A) 7 B) 3 C) 4 D) 14

- 10) Write the set using set-builder notation: 10) _____
 $\{1, 3, 5, \dots, 27\}$
A) $\{x \mid x \text{ is an odd natural number less than } 28\}$
B) $\{x \mid x \text{ is an odd natural number less than } 27\}$
C) $\{x \mid x \in N \text{ and } x < 28\}$
D) $\{x \mid x \in O \text{ and } x < 27\}$
- 11) How many different three letter permutations can be formed from the letters in the word *clipboard*? 11) _____
A) 544,320 B) 729 C) 336 D) 504
- 12) A person's monthly budget includes \$236 for food, \$165 for gasoline, and \$170 for utilities. If the person earns \$2,406 per month, how much money is left for other expenses? 12) _____
A) \$2,071 B) \$1,835 C) \$2,005 D) \$918
- 13) A car travels 348 miles on 5.6 gallons of gasoline. How many miles per gallon did the car get? (Round to the nearest tenth.) 13) _____
A) 64.5 miles per gallon B) 56.6 miles per gallon
C) 16.1 miles per gallon D) 62.1 miles per gallon
- 14) Jane has 15 phone cards worth either \$20 or \$15. How many of each does he have if the phone cards total \$245? 14) _____
A) seven \$20 cards and seven \$15 cards B) three \$20 cards and twelve \$15 cards
C) four \$20 cards and eleven \$15 cards D) eleven \$20 cards and four \$15 cards

15) Estimate the number of people living in the US in 1900.

15) _____



Source: www.census.gov

- A) 56,000,000
- B) 25%
- C) 96,000,000
- D) 76,000,000
- E) 9,600,000

16) Two dice are rolled. Find the probability of getting a 5 on one die or on both dice.

16) _____

- A) $1/3$
- B) $7/18$
- C) $1/6$
- D) $11/36$

17) Write the contrapositive of the conditional statement.

17) _____

If I get a speeding ticket, my parents do not pay for my insurance.

- A) If my parents pay for my insurance, I do not get a speeding ticket.
- B) If I get a speeding ticket, my parents pay for my insurance.
- C) If I do not get a speeding ticket, my parents pay for my insurance.
- D) If my parents do not pay for my insurance, I get a speeding ticket.

18) Let $U = \{5, 10, 15, 20, 25, 30, 35, 40\}$

18) _____

$A = \{5, 10, 15, 20\}$

$B = \{25, 30, 35, 40\}$

$C = \{10, 20, 30, 40\}$.

Find $B \cap C'$.

- A) $B \cap C' = \{5, 15\}$
- B) $B \cap C' = \{25, 35\}$
- C) $B \cap C' = \{30, 40\}$
- D) $B \cap C' = \emptyset$

- 25) Find the range, variance, and standard deviation for the given data. The table below shows the average points scored per game by several intramural softball teams. Round to one decimal place. 25) _____

Team	Points
Bombers	4.1
Crunchers	10.7
Homers	16.3
Pelters	9.3
Smackers	14.5
Whoppers	7.9

- A) range: 10.2, variance: 16.5, standard deviation: 4.1
 B) range: 12.2, variance: 16.5, standard deviation: 4.1
 C) range: 12.2, variance: 19.8, standard deviation: 4.4
 D) range: 10.2, variance: 19.8, standard deviation: 4.4
- 26) If a student's rank in a class of 200 students is 12, find the student's percentile rank. 26) _____
 A) 93 B) 96 C) 95 D) 94
- 27) Find the mean, median, mode, and midrange for the data provided. The data shows hours spent at work for a group of men. 27) _____

Name	Hours
Alvin	62.3
Juan	58.5
Sean	56.9
Victor	47.1
Chan	42.9
Jacques	39.5
Philip	36.7
Roberto	28.7

- A) mean: 45, median: 46.575, mode: 45.5, midrange: 33.6
 B) mean: 45, median: 46.575, mode: 45, midrange: 33.6
 C) mean: 46.575, median: 45.5, mode: no mode, midrange: 45.5
 D) mean: 46.575, median: 45, mode: no mode, midrange: 45.5
- 28) Find Q_1 , Q_2 , and Q_3 for the data set below. 28) _____
 5.4 2.0 6.8 3.1 2.9 4.7 2.1 5.0 1.9 3.4
 A) $Q_1 = 2.1, Q_2 = 3.25, Q_3 = 5.0$ B) $Q_1 = 2.05, Q_2 = 3.1, Q_3 = 5.2$
 C) $Q_1 = 2.05, Q_2 = 3.25, Q_3 = 5.2$ D) $Q_1 = 2.1, Q_2 = 3.4, Q_3 = 5.0$

- 29) Linda and Deepti are walking and jogging on a circular trail. Linda can complete one circuit in 30 minutes, and Deepti can complete the circuit in 42 minutes. If they both start at the same place at the same time, when will they be at the starting place at the same time? 29) _____
- A) 30 minutes B) 1,260 minutes C) 6 minutes D) 210 minutes

HANDWRITTEN RESPONSE. Please respond to the question by drawing the required histogram in the space provided below or on a separate sheet of paper.

- 30) The exam grades of 31 students were used to obtain the frequency distribution below. Construct a histogram for the data.

Class	Frequency
40-49	1
50-59	2
60-69	5
70-79	12
80-89	7
90-99	4