All math problems address TEKS 130.242. Principles of Human Services.

(2) The student demonstrates the skills necessary to enhance personal and career effectiveness in consumer services. The student is expected to:

(C) analyze consumer buying techniques that promote effective use of resources.

**Question 1.** Analyze the chart below.

**Advertising Research**

<table>
<thead>
<tr>
<th>Television Channels</th>
<th>Male</th>
<th>Female</th>
<th>Child</th>
</tr>
</thead>
<tbody>
<tr>
<td>Channel 5</td>
<td>2.8</td>
<td>3.4</td>
<td>2</td>
</tr>
<tr>
<td>Channel 8</td>
<td>3.8</td>
<td>4.4</td>
<td>2.2</td>
</tr>
<tr>
<td>Channel 12</td>
<td>4.5</td>
<td>1.8</td>
<td>3</td>
</tr>
<tr>
<td>Channel 29</td>
<td>1.9</td>
<td>2.8</td>
<td>5</td>
</tr>
</tbody>
</table>

(0-6 People (in thousands))
Which channel would be the best to advertise on if the target audience is males?

a. Channel 5  
b. Channel 8  
c. Channel 12  
d. Channel 29

(2) The student demonstrates the skills necessary to enhance personal and career effectiveness in consumer services. The student is expected to:

(C) analyze consumer buying techniques that promote effective use of resources.

Question 2. According to the chart in #1 which channel would be the best if the target audience is females?

a. Channel 5  
b. Channel 8  
c. Channel 12  
d. Channel 29

(2) The student demonstrates the skills necessary to enhance personal and career effectiveness in consumer services. The student is expected to:

(A) apply the decision-making process in planning the allocation and use of finances;  
(B) employ technology to manage resources.

Question 3. According to the chart in #1 which channel is the best channel to advertise on if there is no specific target audience?

a. Channel 5  
b. Channel 8  
c. Channel 12  
d. Channel 29
(2) The student demonstrates the skills necessary to enhance personal and career effectiveness in consumer services. The student is expected to:

(D) investigate sustainable techniques for managing resources;

(F) identify employment and entrepreneurial opportunities and preparation requirements in the areas of personal interest.

**Question 4.** James is going to a job interview and wants to wear slacks, a button-up and a tie. If he has 2 ties, 3 pairs of slacks and 5 button-ups. How many different combinations does he have that he could wear to the job interview?

- a. 10
- b. 20
- c. 30
- d. 40

(2) The student demonstrates the skills necessary to enhance personal and career effectiveness in consumer services. The student is expected to:

(D) investigate sustainable techniques for managing resources;

(F) identify employment and entrepreneurial opportunities and preparation requirements in the areas of personal interest.

**Question 5.** James is going to a job interview and wants to wear slacks, a button-up and a tie. He has 2 ties, 3 pairs of slacks and 5 button-ups. At the last minute he decides to wear one of his 3 suit jackets, how many more outfit combinations does he have now that he is going to wear a jacket?

- a. 13
- b. 30
- c. 60
- d. 90
(2) The student demonstrates the skills necessary to enhance personal and career effectiveness in consumer services. The student is expected to:

(D) investigate sustainable techniques for managing resources;

(F) identify employment and entrepreneurial opportunities and preparation requirements in the areas of personal interest.

**Question 6.** James is going in for a job interview and wants to wear slacks, a button-up and a tie. He has 2 ties, 3 pairs of slacks and 5 button-ups. If he wants to wear his red tie with his white shirt and black pants, what are the chances of picking this outfit on the first try without looking when he grabs his clothes?

a. \( \frac{1}{5} \)

b. \( \frac{1}{10} \)

c. \( \frac{1}{15} \)

d. \( \frac{1}{30} \)

(5) The student demonstrates the skills necessary to enhance personal and career effectiveness in family and community services. The student is expected to:

(A) identify the basic functions of the family, including roles and responsibilities;

(B) investigate societal, cultural, demographic, and economic factors affecting the responsibilities of family members;

(C) analyze the multiple roles and responsibilities assumed by individuals within the family.

**Question 7.** Jeremy's dress shoes' soles have broken. He can either buy a new pair of dress shoes or he can pay a shoe repairman to fix his shoes. If the repair tells him that the new sole will cost $15 plus $20 an hour for labor, which inequality could he use to compare the cost \( C \) of a new pair of dress shoes and the cost to fix the shoes if the repairman works \( h \) hours.

a. \( C > 20h + 15 \)

b. \( C < 20 + 15h \)

c. \( h < 20 + C \)

d. \( C < 20h \)
(3) The student demonstrates the skills necessary to enhance personal and career effectiveness in counseling and mental health services. The student is expected to:

(A) determine types of crises;
(B) determine appropriate responses, management strategies, and technology available to meet individual and family needs;
(G) describe rewards, demands, and future trends in counseling and mental health services.

**Question 8.** Angela is facilitating a group counseling session dealing with credit card debt. To begin the group she has everyone write down on a piece of paper the amount of credit card debt he or she currently has. The numbers are listed below.

$23,750, $12,500, $52,000, $8,800, $18,500, $25,625, $15,600

What is the median of the data that was collected?

a. $ 8,800  
b. $15,600  
c. $17,050  
d. $18,500
(3) The student demonstrates the skills necessary to enhance personal and career effectiveness in counseling and mental health services. The student is expected to:

(A) determine types of crises;

(B) determine appropriate responses, management strategies, and technology available to meet individual and family needs;

(G) describe rewards, demands, and future trends in counseling and mental health services.

**Question 9.** Angela is facilitating a group counseling session dealing with credit card debt. To begin the group she has everyone write down on a piece of paper the amount of credit card debt he or she currently has. The numbers are listed below.

$23,750, \$12,500, \$52,000, \$8,800, \$18,500, \$25,625, \$15,600$

Angela wants the numbers to have a big impact on the group. What measure of central tendency would give her the largest number?

a. Mean  
b. Median  
c. Mode  
d. Range
(3) The student demonstrates the skills necessary to enhance personal and career effectiveness in counseling and mental health services. The student is expected to:

(A) determine types of crises;

(B) determine appropriate responses, management strategies, and technology available to meet individual and family needs;

(G) describe rewards, demands, and future trends in counseling and mental health services.

**Question 10.** Angela is facilitating a group counseling session dealing with credit card debt. To begin the group she has everyone write down on a piece of paper the amount of credit card debt they currently have. The numbers are listed below.

\[ \$23,750, \$12,500, \$52,000, \$8,800, \$18,500, \$25,625, \$15,600 \]

If the entire group pledges to decrease its credit card debt by $500 a month, approximately how long will it take for everyone in the group to become debt-free assuming no new debt is acquired and everyone keeps the pledge?

a. 4.2 years  
b. 8.6 years  
c. 11.5 years  
d. 26.3 years
Answer Key

1) C
2) B
3) B
4) C
5) C
6) D
7) A
8) D
9) A
10) D