

Education and Training

Principles of Education and Training

Multiple Choice Math Assessment Problems



All math problems address TEKS 130.142. Principles of Education and Training.

(6) The student investigates career opportunities within the education and training career cluster. The student is expected to:

(B) use labor market information, knowledge of technology, and societal and economic trends to forecast job profiles within each cluster program of study.

Question 1. Susan is a 9th grader and knows that she wants to be a teacher when she grows up. She wants to estimate what her starting salary will be when she becomes a teacher after 4 years of college. If the starting salary for a teacher is currently \$52,000 and increases 5% every two years, what can she expect to make in her first year of teaching?

- a. \$54,600
- b. \$57,300
- c. \$60,196
- d. \$63,206

(1) The student completes career investigations within the education and training career cluster. The student is expected to:

(C) recognize the impact of career choice on personal lifestyle.

Question 2. If Mr. Ramos works in a district where 10% of his yearly salary S is put into a retirement program, which equation could be used to find his monthly salary M ?

- a. $M = 10S$
- b. $M = .90S$
- c. $12M = .90S$
- d. $M = .10$

(1) The student completes career investigations within the education and training career cluster. The student is expected to:

(C) recognize the impact of career choice on personal lifestyle.

Question 3. After graduating from college Mark wants to become a teacher. He is trying to decide if he should get a Master's degree before starting teaching, so he looks at the cost. The Master's program he is looking at is 5 semesters long and the college he would be attending has tuition fees that are \$6,300 a semester. If he would receive \$2,000 extra each year as a teacher with a Masters degree, how long will he have to teach to offset the cost of the tuition fees?

- a. 4 years
- b. 8 years
- c. 12 years
- d. 16 years

(2) The student understands societal impacts within the education and training career cluster. The student is expected to:

- (B) identify cultural and societal changes that have affected educational systems across the United States.

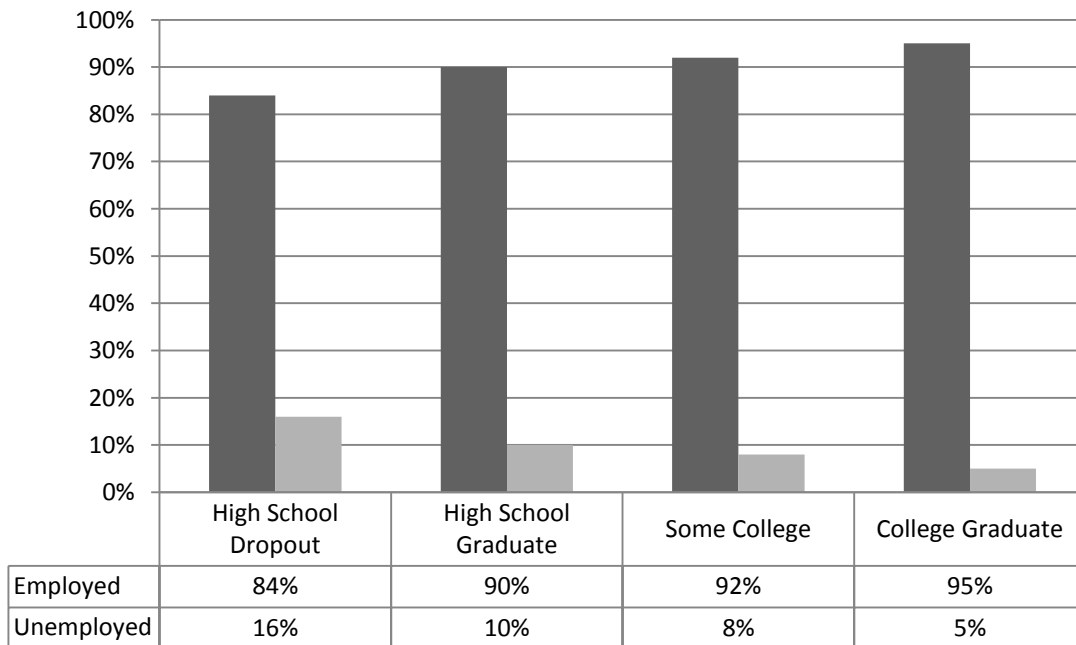
Question 4. To try to entice more people to become teachers a grant of \$2,000 a semester is offered to college students if they will agree to teach for 5 years after they graduate from college. If someone takes the grant for all four years of college and then decides not to teach the grant is turned into a loan using this formula $A = P(1 + .08)^t$. If A is the final amount of the loan, P is the amount of grant taken out and t is the number of years since the first money was taken, approximately how much would you owe if you decide not to teach right after college but took the \$2,000 for all four years of college?

- a. \$ 8,000
- b. \$16,000
- c. \$22,000
- d. \$28,000

(2) The student understands societal impacts within the education and training career cluster. The student is expected to:

(C) use labor market information, knowledge of technology, and societal or economic trends to forecast job profiles within the education and training career cluster.

Question 5. Analyze the chart below.



How much better are your chances of having a job if you graduate from college than if you only graduate from high school?

- a. 3%
- b. 5%
- c. 6%
- d. 11%

(2) The student understands societal impacts within the education and training career cluster. The student is expected to:

- (C) use labor market information, knowledge of technology, and societal or economic trends to forecast job profiles within the education and training career cluster.

Question 6. Using the chart in #5, which of the following statements is NOT a reasonable conclusion?

- a. The overall unemployment rate is 9.75%
- b. Employment rate is higher than unemployment rate in all categories
- c. College graduates have a lower unemployment rate than high school graduates
- d. High school dropouts have a 6% higher unemployment rate than high school graduates.

(1)The student completes career investigations within the education and training career cluster. The student is expected to:

- (B) analyze transferable skills among a variety of careers within the education and training career cluster.

Question 7. Jasmine wants to become an emergency medical technician (EMT). The company she wants to work for provides training Monday-Friday from 1 p.m. - 5 p.m. If she needs 120 hours of training and is able to go to all the training sessions, how many weeks will it take for her to complete training to become an EMT?

- a. 3 weeks
- b. 6 weeks
- c. 9 weeks
- d. 12 weeks

(4)The student explores careers in professional support services. The student is expected to:

- (A) summarize the various roles and responsibilities of professionals in the field of professional support services.

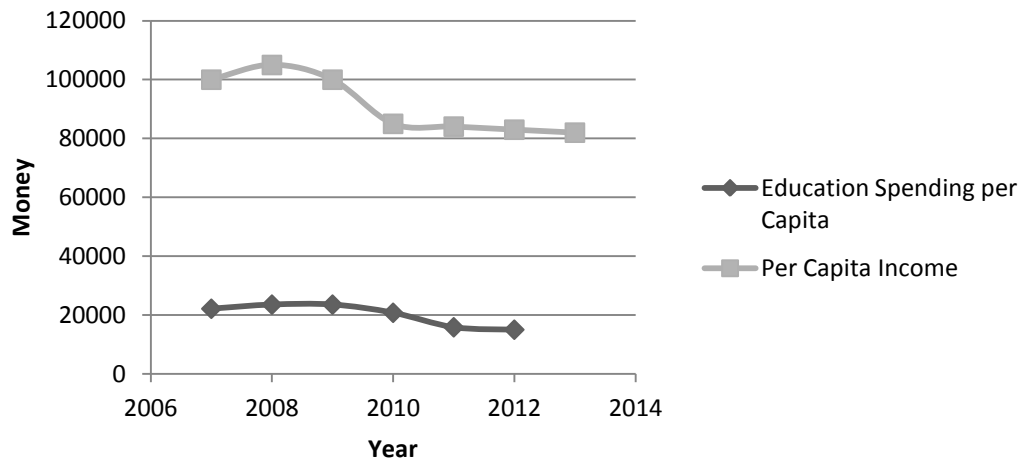
Question 8. Newspaper sales are declining 8% per year due to an increase in use of online news sources. Jobs in the newspaper industry are decreasing twice as fast as newspaper sales. If a local newspaper company has 38 employees in 2011, how many employees can they expect to have in 2015?

- a. 32
- b. 27
- c. 23
- d. 19

(6) The student investigates career opportunities within the education and training career cluster. The student is expected to:

- (B) use labor market information, knowledge of technology, and societal and economic trends to forecast job profiles within each cluster program of study.

Question 9. Analyze the chart below.



According to the chart above, which of the following statements would be a reasonable conclusion?

- Eventually there will be no money spent on education.
- As per capita income decreases, money spent on education increases.
- As per capita income decreases, money spent on education decreases.
- As per capita income increases, money spent on education decreases.

(6) The student investigates career opportunities within the education and training career cluster. The student is expected to:

- (B) use labor market information, knowledge of technology, and societal and economic trends to forecast job profiles within each cluster program of study.

Question 10. According to the graph in #9, what is a reasonable prediction for money spent on education in 2013 if the trend continues?

- a. \$15,000
- b. \$20,000
- c. \$25,000
- d. \$30,000

Answer Key

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