

# Education and Training

## Human Growth and Development

### Multiple Choice Math Assessment Problems

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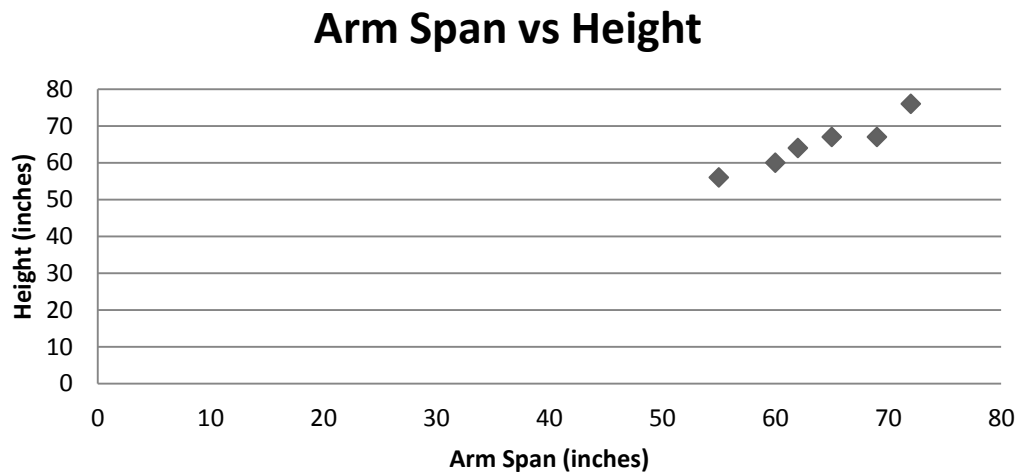


All math problems address TEKS 130.143. Human Growth and Development.

(1) The student understands historical, theoretical, and research perspectives of human growth and development. The student is expected:

(A) explain the role of theories in understanding human development.

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



Which of the following is a true statement?

- a. Arm span is not related to height.
- b. Arm span and height have an inverse relationship.
- c. Arm span and height have a positive correlation.
- d. Arm span and height have a negative correlation.

(1) The student understands historical, theoretical, and research perspectives of human growth and development. The student is expected

(D) compare and contrast the research methods commonly used to study human development.

**Question 2.** Using the chart in #1, which equation would best fit the data where  $y$  is height and  $x$  is arm span?

- a.  $y = x$
- b.  $y = x^2$
- c.  $y = x + 50$
- d.  $y = \frac{1}{2}x - 20$

(2) The student understands the importance of prenatal care in the development of a child. The student is expected to:

(A) describe nutritional needs prior to and during pregnancy;

(B) analyze reasons for medical care and good health practices prior to and during pregnancy.

**Question 3.** Jennifer is taking a multivitamin when she finds out she is pregnant. Her multivitamin has 500 mcg folic acid, and she needs to increase her folic acid intake by 250%. How much folic acid should she be taking during pregnancy?

- a. 750 mcg
- b. 1250 mcg
- c. 1750 mcg
- d. 2250 mcg

(2) The student understands the importance of prenatal care in the development of a child. The student is expected to:

(D) discuss the role of genetics in prenatal development.

**Question 4.** Using the Punnett square model of genetic prediction, Mr. and Mrs. Alameda want to know the chances of their baby having blue eyes. Mr. Alameda has brown eyes with one dominant brown eye gene and one recessive blue eye gene, and Mrs. Alameda has brown eyes with one dominant brown eye gene and one recessive blue eye gene. What is the probability of their baby having blue eyes?

- a. 0%
- b. 25%
- c. 50%
- d. 75%

(3) The student understands the development of children ages newborn through two years. The student is expected to:

(B) analyze various developmental theories relating to infants and toddlers.

**Question 5.** Andrea heard that adult height can be estimated by doubling a child's height at age 2. What is her child's estimated adult height if at age 2 she is 30 inches tall?

- a. 5 feet tall
- b. 5 feet 4 inches tall
- c. 5 feet 8 inches tall
- d. 6 feet tall

(4) The student understands the development of children ages three through five years. The student is expected to:

- (A) analyze the physical, emotional, social, and cognitive development of preschoolers.

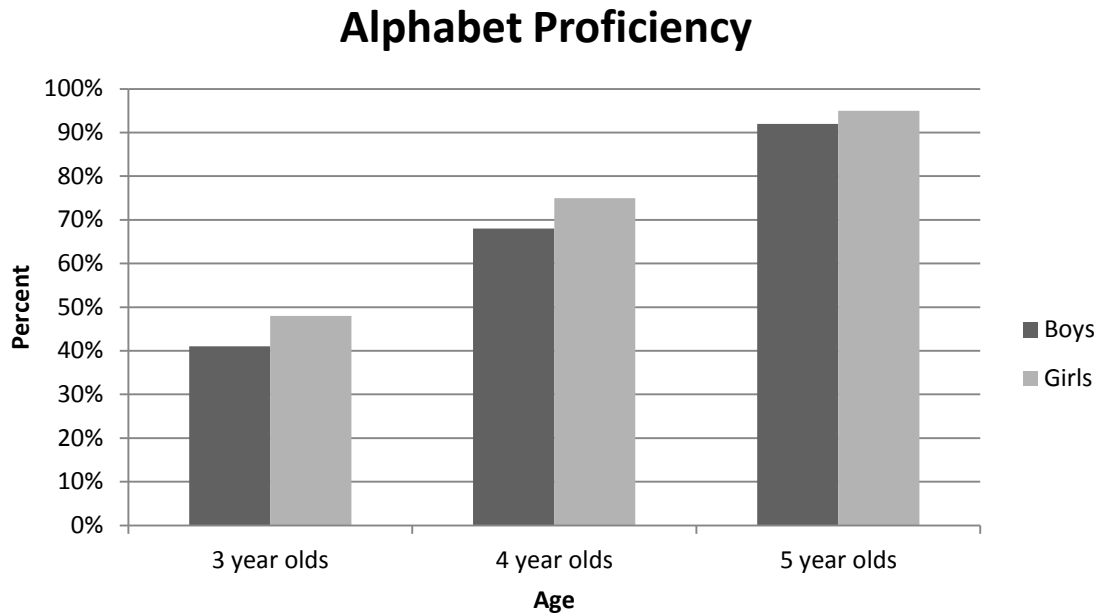
**Question 6.** In order to assess her preschool teacher's performance, the principal at Hope Elementary gathers data on how many children in each class know the alphabet. If 80% of the class is considered acceptable, how many of Miss Kirby's 18 children need to know the alphabet?

- a. 13
- b. 15
- c. 18
- d. 21

(4) The student understands the development of children ages three through five years. The student is expected to:

(B) analyze various developmental theories relating to preschoolers.

**Question 7.** Analyze the chart below.



Which of the following statements is a logical conclusion from the chart?

- Five year olds are smarter than three and four year olds.
- Four year old girls are smarter than five year old boys.
- Three year olds should start school sooner.
- About half of three year old girls know the alphabet.

(8) The student understands the development of adults ages 20 through 39 years. The student is expected to:

- (A) analyze various development theories relating to early adults, including biological and cognitive development.

**Question 8.** Andrea's daughter mentioned above in question #5 has now reached her adult height of 5 feet 3 inches tall. What is the percentage difference from her predicted height?

- a. 3%
- b. 5%
- c. 7%
- d. 10%

(10) The student understands the development of adults ages 66 years and older. The student is expected to:

- (A) analyze various development theories relating to those within the stage of late adulthood, including biological and cognitive development.

**Question 9.** If life expectancy for males is 79.5 years on average and life expectancy for women is 83 years, how many more days do women live on average?

- a. 1,095 days
- b. 1,277.5 days
- c. 1,460 days
- d. 1,642.5 days

(10) The student understands the development of adults ages 66 years and older. The student is expected to:

(B) analyze various development theories relating to those within the stage of late adulthood, including emotional, moral, and psychosocial development.

**Question 10.** If 30 minutes of laughter adds 8 hours to your life, how much laughter would be needed to live an extra year?

- a. 182.5 hours
- b. 547.5 hours
- c. 10,950 hours
- d. 32,850 hours

# Answer Key

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