Accuplacer Practice

12/12/2015

What is on an ACCUPLACER Test?

Reading Comprehension

The Reading Comprehension test, comprised of 20 questions, measures your ability to understand what you read, to identify main ideas and to make inferences. You need to distinguish between direct statements and secondary or supporting ideas.

What is on an ACCUPLACER Test?

Sentence Skills

The Sentence Skills test, comprised of 20 questions, measures your understanding of sentence structure — what makes a sentence complete and clear. Some questions deal with the logic of the sentence, and others with the relationships between two sentences.

What is on an ACCUPLACER Test?

Elementary Algebra

- **Operations with algebraic expressions:** topics include the evaluation of simple formulas and expressions, adding and subtracting monomials and polynomials, multiplying and dividing monomials and polynomials, the evaluation of positive rational roots and exponents, simplifying algebraic fractions, and factoring.
- **Solution of equations, inequalities, word problems:** topics include solving linear equations and inequalities, solving quadratic equations by factoring, solving verbal problems presented in an algebraic context, including geometric reasoning and graphing, and the translation of written phrases into algebraic expressions.

What is on an ACCUPLACER Test?

College-Level Math

The College-Level Math test, comprised of 20 questions, measures your ability to solve problems that involve college-level mathematics concepts. There are five types of College-Level Math questions:

- **Algebraic operations:** topics include simplifying rational algebraic expressions, factoring, expanding polynomials, and manipulating roots and exponents.
- **Solutions of equations and inequalities:** topics include the solution of linear and quadratic equations and inequalities, equation systems and other algebraic equations.
- **Coordinate geometry:** topics include plane geometry, the coordinate plane, straight lines, conics, sets of points in the plane, and graphs of algebraic functions.
- **Applications and other algebra topics:** topics include complex numbers, series and sequences, determinants, permutations and combinations, fractions and word problems.
- **Functions and trigonometry:** topics include polynomials, algebraic, exponential, and logarithmic and trigonometric functions.

Let’s try some sample problems…

Write the answer to each problem on your whiteboard.

Show your work for the algebra problems.

Reading Comprehension

Read the statements below and then choose the best answer to the question from the list of lettered choices that follows.

Sometimes when we don't get enough sleep we become very short-tempered.

It is important to set a time to go to bed that is realistic.

How are these two sentences related?

A. The first sentence explains the meaning of the second,
B. The second sentence explains why a lack of sleep affects us.
C. The second sentence contradicts the first.
D. The second sentence proposes a solution.

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Reading Comprehension

Read the statements below and then choose the best answer to the question from the list of lettered choices that follows.

Most people collect Star Wars toys for sentimental reasons.

Some people collect them strictly to make money.

What is the relationship between the two sentences?

A. Cause & Effect
B. Contrast
C. Repetition
D. Statement & Example

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Reading Comprehension

Answer the question based on what is stated or implied.

There are two kinds of jewelry that I do. There is commercial jewelry - class rings, necklaces, the kinds of things most people wear. I sell these items to meet my expenses for raw materials, supplies, and to make my living. The other, more creative work I do makes me feel that I am developing as a craftsperson.

The author of this passage implies that:

A. Artists are poor.

B. There is no market for creative work.

C. Rings and necklaces cannot be creative.

D. Commercial and creative work fulfill different needs for the artist.

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Reading Comprehension

Read passage #1 and choose the one organizational pattern from the lettered choices following the passage that best describes the way the author organized this paragraph.

A. Cause and Effect
B. Example
C. Comparison and Contrast
D. Humor

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Reading Comprehension

Read the statements below and then choose the best answer to the question from the list of lettered choices that follows.

Jenny does not like cake.

She does not like to bake it, to ice it, or to eat it.

What does the second sentence do?

A. It states the cause of the first.

B. It emphasizes what is stated in the first.

C. It compares the three things Jenny does not like about cake.

D. It draws a conclusion about Jenny.

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Elementary Algebra

Simplify. Write answers in scientific notation.

$$\frac{(3.2 \times 10^{5})(2 \times 10^{-3})}{2 \times 10^{-5}}$$

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$$\frac{(3.2 \times 10^5)(2 \times 10^{-3})}{2 \times 10^{-5}}$$

$$\frac{(3.2 \times 2) \times (10^5 \times 10^{-3})}{2 \times 10^{-5}} = \frac{6.4 \times 10^2}{2 \times 10^{-5}} = \frac{6.4}{2} \times \frac{10^2}{10^{-5}}$$

$$= 3.2 \times 10^7$$

Elementary Algebra

Solve the following for *x*.

$$8 - 4(x - 1) = 2 + 3(4 - x)$$

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Solve the following for *x*.

$$8 - 4(x - 1) = 2 + 3(4 - x)$$

$$8 - 4x + 4 = 2 + 12 - 3x$$

$$12 - 4x = 14 - 3x$$

$$12 = 14 + x$$

$$-2 = x$$

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Let x = liters of 40% solution *20 – x = liters of 16% solution*

$$.40x + .16(20 - x) = 20(.22)$$

$$.40x + 3.2 - .16x = 4.4$$

$$0.24x + 3.2 = 4.4$$

$$0.24x = 1.2$$

$$x = 5$$

5 liters of 40% solution and 15 liters of 16% solution

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Simplify and write answers with positive exponents.

$$\frac{24x^4-32x^3+16x^2}{8x^2}$$

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$$\frac{24x^4}{8x^2}-\frac{32x^3}{8x^2}+\frac{16x^2}{8x^2}=3x^2-4x+2$$

Elementary Algebra

Simplify and write answers with positive exponents.

$(4x^2y^6z)^2(-x^{-2}y^3z^4)^6$

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$4^2x^4y^{12}z^2 \times x^{-12}y^{18}z^{24}$

$16x^{-8}y^{30}z^{26}$

$$\frac{16y^{30}z^{26}}{x^8}$$

Elementary Algebra

Factor: $x^2 + 5x - 6$

Elementary Algebra

Factor: $x^2 + 5x - 6$

$(x + 6)(x - 1)$

Sentence Skills

Select the best version of the underlined part of the sentence. If you think the original is best, select the first answer.

Predictions twenty years ago that the phonograph record was about to become obsolete have proven to be true.

A. Predictions twenty years ago that
B. Predictions twenty years ago,
C. Twenty years ago, predictions that
D. Predictions, twenty years ago

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A coffee and bagel, the elderly man ordered before finding a seat in the café.

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B. The elderly man ordered, a coffee and bagel,
C. The elderly man ordered a coffee and bagel
D. A coffee and bagel, the elderly man was ordering

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We held the elevator door open <u>for her rushing through</u> the lobby.

A. for her rushing through
B. when we saw her rushing through
C. after her rushing through
D. because of her rushing through

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Select the best version of the underlined part of the sentence. If you think the original is best, select the first answer.

It was a busy morning <u>because I was having</u> many meetings.

A. due to the having of
B. when I was having
C. because I had
D. because I was having

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Sentence Skills

Rewrite the sentence in your head following the directions given below. The new sentence should have essentially the same meaning as the original sentence.

Muggings are fairly common downtown, but they occur more often when a person walks alone.

Rewrite, beginning with

When a person walks alone downtown,

The next words will be:

A. It is more likely that
B. Therefor it is more likely
C. More common it will be that
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Elementary Algebra

Solve: $4a^2 + 9a + 2 = 0$

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$$(4a + 1)(a + 2) = 0$$

$$4a + 1 = 0 \quad and \quad a + 2 = 0$$

$$a = -\frac{1}{4}, -2$$

Elementary Algebra

Perform the following operation and simplify where possible.

$$\frac{4}{2a-2}+\frac{3a}{a^2-a}$$

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$$\frac{4}{2a-2}+\frac{3a}{a^2-a}$$

$$\frac{4}{2(a-1)}+\frac{3a}{a(a-1)} \qquad LCD = 2a(a\text{-}1)$$

$$=\frac{4}{2(a-1)}\cdot\frac{a}{a}+\frac{3a}{a(a-1)}\cdot\frac{2}{2}$$

$$=\frac{4a}{2a(a-1)}+\frac{6a}{2a(a-1)}$$

$$=\frac{10\cancel{a}}{2\cancel{a}(a-1)}=\frac{5}{a-1}$$

College Algebra

Solve: $4\sqrt{2y-1}-2=0$

College Algebra

Solve: $4\sqrt{2y-1}-2=0$

$$4\sqrt{2y-1}=2$$

$$\sqrt{2y-1}=\frac{1}{2}$$

$$\left(\sqrt{2y-1}\right)^2=\left(\frac{1}{2}\right)^2$$

$$2y-1=\frac{1}{4}$$

$$2y=\frac{5}{4}$$

$$y=\frac{5}{8}$$

College Algebra

Solve: $\log_2(x+1) + \log_2(x-1) = 3$

College Algebra

Solve: $\log_2(x+1)+\log_2(x-1)=3$

$\log_2(x+1)(x-1)=3$

$2^3=x^2-1$

$9=x^2$

$\pm 3=x$

$x=3\ (-3\ causes\ the\ argument\ of\ a\ logarithm\ to\ be\ negative)$