

Yes! You Can Improve Your Placement Test Scores

2005 Edition



**The Learning Lab
Cape Fear Community College
415 North Second Street
Wilmington, NC 28401
(910) 362-7137**

Preface

This book was created in response to numerous requests for help to prepare for the ASSET Placement Test. Students wishing to attend Cape Fear Community College are often non-traditional. Some are people returning to school after years away from a formal classroom setting. Many have not practiced the skills covered on the test for a long time. Even fewer have recently taken standardized tests. Others did not do all that well in high school.

There needs to be one note of caution here. If you have deficiencies that go beyond review, you need to take the developmental courses to prepare for college level classes. The reason for those classes is to enable you to be successful in college level work.

Whatever your circumstance, this book is written for you. Your first step toward a better future begins with being successful in your endeavor to gain a higher education. Good luck on the test!

Revised from the original document created by L. Katherine Burkheimer, 1998

Basic Training

Before the Test: The Four R's

1. REST--get enough sleep.
2. RELAX--watch out for caffeine in coffee, tea, or sodas.
3. READY--arrive ahead of test time.
4. RESTROOM--use it. You will not be allowed to leave the test area during testing.

Test Time

1. Reduce your test anxiety. Try this!
 - Relax your face and feel yourself smiling on the inside.
 - Breathe deeply and slowly in through your nose, hold, slowly exhale through your mouth. Do this three times.
2. Preview the test.
 - What types of questions are asked?
 - What do the written directions say?
 - What is the test administrator telling you about the test?
3. Plan your time.
 - How many questions are there on the test?
 - How much time do I have?
 - How much time do I have for each question?
4. Answer the easiest questions first.
 - Why?
 - A. You will answer all the questions you can answer correctly, in case time runs out before you answer all the questions.
 - B. You might think of answers to some of the difficult questions.
 - C. You might find answers to some of the difficult questions.
 - How?
 - A. Read each question twice and answer it or move on to the next question.
 - B. After you have answered all you can, repeat this process.
 - C. For any questions that you can't answer, make an educated guess.
5. Answer all questions. Leave no blanks. Allow time for this at the end of the test period.
6. Check your answers carefully to avoid careless errors. Do NOT change any answers unless you are positive your answer is wrong.

After the Test

Relax. Remember you did the best you could.

Reading Comprehension X Read It Right

Steps on how to read for standardized tests

1. Questions about a passage do not appear in order of difficulty; however, passages themselves are usually from least to most difficult.
2. Always skim the questions for a passage before you actually read the passage.
3. As you quickly read the passage, concentrate on the main idea and main points.
4. Next, note specific examples in fact filled areas.
5. Notice key words that indicate a shift in viewpoint. Some examples of these words are: but, however, although, nevertheless, atypically, moreover, and unless. What kinds of shifts do these words indicate?
6. Don't grab at a likely looking answer. Eliminate those that are wrong so you choose the correct answer.
7. Lengthy quotes are seldom correct answer choices. Tests are to see if you understand what you read.
8. Use what you do know. Truth is truth.
9. Watch out for answer choices that express strong emotion. How often does something happen always or never?

Types of questions you will see on the test

1. Main idea: What is the point that the writer is making? What should I remember about this paragraph? What is this essay about?
2. Supporting details: What in the essay holds up or supports the main idea?
3. Factual information: What pieces of specific information supports the main idea or is an example you should remember?
4. Inference: What information is implied, not directly stated, or said that is the opposite of what the author means?
5. Context clues: What do words mean when their definition is gained from the reading?

Sample Reading Passages

Each passage is followed by eight questions. Answers to the questions are in the last section of the book.

Sample 1:

In the Southeastern United States, gardening does not have to end with the advent of cool, fall weather. In fact, a fall garden can produce luscious vegetables and herbs until around Christmas. The gardener must choose vegetables and herbs that grow in cool weather. Some examples are beets, various greens, lettuce, certain types of squash, dill, and parsley. Moreover, there are certain steps gardeners need to take to ensure the garden produces an abundant harvest.

Garden design is the first step in having a productive fall garden. One design that works well is to mark off a ten by sixteen-foot rectangle. Divide the rectangle into no more than five or six plots. The plots should be small enough so gardeners can reach to the middle for easy weeding and picking. A trench should be dug about three inches deep and wide around each plot to make sure rain will not drown the plants. One tip to make gardening more pleasant is to use lawn timbers (eight feet in length) to form a border around the outside of the plot. Using lawn timbers

is an excellent idea because they help control weeds and are very inexpensive; seeds sell for about a dollar each.

Soil preparation is also an important step to having an abundant harvest. If the garden space was used in the summer, it must be cleaned out to eliminate all the old plants, including all the roots. A tiller will soften and aerate the soil; it will help loosen any roots missed. After the first tilling, add fertilizer, top soil, mulch and vermiculite and then till the garden plot again to mix everything. It is just like mixing a cake; it must be mixed thoroughly. When tilling is complete, gardeners should take a rake and smooth the top of the soil.

Selecting and planting the seeds is the next step in the gardening process. It is imperative to make sure seeds are selected for the area of the country where the garden is located. Seeds that grow well in the mountains may not grow as well near the ocean. One piece of advice is to subscribe to a gardening magazine or purchase a good gardening book. The information obtained from either source will help prevent the disappointment of no harvest. Most seeds only need to be planted one fourth inch deep. The seeds should be sprinkled on your garden and raked to get them below the soil. After planting the seeds, the entire garden needs a thorough watering; water every day for a week to speed up seed germination.

The last four tips can really make a difference in how large a harvest the gardener will have. First, weeding every week is a must. Weeds can take over and use up all the nutrition from the soil, and then garden plants will not flourish. Second, gardens need to be fed. Fertilizer should be used but only once a month. Whatever type of fertilizer is used, plants should be monitored to be sure they get neither too much nor too little nutrition. Third, a garden must get enough water.

About one inch per week is the minimum to ensure proper growth and development of the plants. Fourth, half the seeds can be planted, and then the second half of the seeds can be planted two weeks later. This type of planting will provide a staggered harvest and prevent either an overabundance or lack of crops at one time.

What should be planted? Some suggestions are turnips, butter lettuce, butter squash, collards, beets, spinach, dill, parsley, chives, basil, and fennel, among many others. Check the back of the seed packets to discover where seed types will flourish. Any type of vegetable a gardener grows in a fall garden can be a source of pleasure, pride and great eating.

1. Which title best describes the main idea of paragraph four?
 - A. How to Prepare a Fall Garden
 - B. Gardening Is Like Baking a Cake
 - C. Selecting and Planting the Seeds
 - D. Designing a Summer Garden
2. According to the passage, what is the meaning of the word "advent" in line 1?
 - A. end
 - B. a religious ceremony
 - C. onset
 - D. success
3. What is the minimum amount of water a fall garden needs per week?
 - A. one half inch
 - B. one inch
 - C. two inches
 - D. three inches
4. According to the passage, which inference can you make about why you till the garden plot at least two times?
 - A. old plant roots can make your harvest more abundant
 - B. loose, soft soil absorbs water less than tight, hard soil
 - C. plant roots can go down deeper into the soil
 - D. tilling to remove old debris and then tilling in fertilizer will not help your plants grow strong
5. What helps speed up seed germination?

- A. raking
 - B. warm temperatures
 - C. weeding
 - D. watering
6. From the passage, what does "germination" (line 27) most likely mean?
 - A. sprout
 - B. die
 - C. flower
 - D. harvest
 7. What is the main purpose of using lawn timbers when you plant a fall garden?
 - A. they make the garden more attractive
 - B. they work as a fertilizer
 - C. they help aerate the soil
 - D. they help control weeds
 8. Which of the following would NOT be a good choice for a fall garden?
 - A. fennel
 - B. corn
 - C. iceberg lettuce
 - D. beets

Sample 2:

The fiscal year 1994-1995 has been profitable for Ivy's Café. The 75% increase in sales is the result of radical changes from the previous years of our operation. Our three restaurants showed a profit of \$1,500,000 on \$3,000,000 in sales. 1996 should prove to be an even more profitable year for the owners when sales are expected to reach \$5,000,000 with an even higher profit margin. This increase is a big improvement over the \$1,000,000 in sales during the 1992-1993 fiscal year.

The most important factor in our success is the hiring of Claude Filino, our chef from Paris. Claude combines gourmet cooking with practical business sense. As food manager for the restaurants, he oversees each kitchen and monitors quality control. The quality and variety of food served has attracted a clientele that is willing to pay for high quality food. The lunch specials are affordable and delectable which attracts the people working in nearby businesses.

The general manager first decided to overhaul all of the restaurants to make them more attractive to customers. She decided upon a natural theme with colors that are relaxing yet stimulating. She began with the original Ivy's Café and used natural burlap woven with beige, pink and green as wall covering. Margie then replaced the individual tables with large, roomy booths upholstered in a warm brown. Partitions were installed to section the dining area so booths could be used throughout. Margie replaced the carpet with terra cotta tile a shade darker than the pink in the wall covering. Flowering plants were placed throughout to improve air quality and provide visual stimulation. After she finished the original Ivy's Café, Margie overhauled all the restaurants using the same theme.

The menu was then replaced with one that better reflects the tastes of today's clientele. Meats were to be grilled or baked; vegetables were to be steamed, sautéed in olive oil or baked; and desserts were to be light and fluffy. A new soup and salad section of the menu also added variety. Gazpacho, bouillabaisse, sea crab, and consommé soups replaced the fare of tomato and chicken noodle soups. The basic garden salad was replaced with Caesar, Greek, and Italian salads. Before these changes, Ivy's Cafés were only known as a place to get a cheap, quick meal. All menu items were heavy with most entrees being fried or having thick gravy.

Finally, Margie advertised for a gourmet chef. She interviewed over one hundred candidates before choosing Claude Filino. His qualifications are impeccable, and his business acumen is astute. He graduated from the Culinary School of Paris and has worked for such enterprises as Saris and Clippano's, the most successful restaurant in North America. While at Clippano's, he

used his extensive knowledge and shrewdness in restaurant management to increase sales over 50 percent in six months. Our willingness to provide an amenable salary, excellent working conditions, and profit sharing were reasons that Claude accepted the position of overseeing the Ivy's Café chain.

The new decor, the new menu, and the presence of Claude have resulted in our restaurants being written up in Today's Gourmet, the most respected food publication in our region. Appetizer, salad and soup sales have increased 95 percent over the fiscal year. Restaurant surveys show a marked improvement in customer satisfaction with a 85 percent approval rating. In addition, those who come in for lunch enjoy their meals so much that they return for dinner. Overall, the chain of Ivy s Cafés has remarkable increases in sales, return business and new business; therefore, the next fiscal year should be the best year ever for our company.

1. In the fifth paragraph, the word "acumen" is used to mean:
 - A. fulfillment
 - B. espresso
 - C. knowledge
 - D. salesmanship
2. If profits for Ivy s Cafés continue to increase as expected, sales will increase to how much for the 1996 fiscal year?
 - A. \$1,000,000
 - B. \$2,500,000
 - C. \$4,000,000
 - D. \$5,000,000
3. Before the fiscal year 1994-1995, Ivy s Café was known for what?
 - A. a place to get a cheap, quick meal
 - B. a place to relax and meet friends
 - C. a place to eat only vegetarian food
 - D. a place to have excellent mixed drinks
4. Which of the following is most likely to eat at Ivy's Café?
 - A. teenagers
 - B. senior citizens
 - C. families with a lot of children
 - D. business men and women
5. The main reason, according to the passage, for Ivy's Cafés increased success is what?
 - A. remodeling
 - B. salads
 - C. decor
 - D. Claude Filino
6. Which of the following was not available at the restaurants before 1995?
 - A. tomato soup
 - B. fried chicken
 - C. steamed vegetables
 - D. garden salad
7. Of the following, which was not a factor in increased sales?
 - A. the chef
 - B. the general manager
 - C. the plants
 - D. the kitchen
8. Sales for 1994-1995 increased by what percent?
 - A. 100%
 - B. 75%
 - C. 50%

D. 25%

Sample 3:

"Did you ever surf the Pipeline in Hawaii?"

"No, but I surfed in the Bahamas."

"Was it great? Were the waves big?"

"Oh yes. It was wonderful down there. The waves were awesome."

"How old were you when you went to the Bahamas?"

"Well, let's see. I must have been about twenty. No, it was after I met your mom. So, I guess I was about twenty-three."

"Gee, did Mom go with you?"

"Heavens no! She was at college then. Besides, she never thought much about surfing."

"How did you get there? Did you save up your money to go?"

"First, I worked three jobs to save up enough money to go. When I mean go, I don't mean for a few days mind you. I wanted to stay in the Bahamas for at least six months. When I had saved up enough money, I bought an airline ticket. Lord, what a plane! It was a World War II oldie, and I wasn't sure I would get there alive. When we landed, I got down on my hands and knees and kissed the ground."

"What! You must be kidding. Where did you stay?"

"No, I'm not kidding. Well, since I wanted to stay for so long and all, I took a tent and camped out in the woods near the beach. As a matter of fact, my tent took a week to get to me. The airline put it on the wrong plane. I slept in a cave for a week. My best friend for that week was a bat. He slept all day while I was surfing. At night, he flew out over my head to hunt for food. That bat hunted from dusk to dawn."

"Did you like the people down there?"

"Oh yes. They were good to all the surfers. They liked Americans partly because we had money to spend. The Bahamians were easy going and seemed to be happy all the time. They introduced me to some new food like pigeon peas and fried bananas. Whenever one of the surfers got cut on the reef, they took him into their homes and looked after him until he was O.K."

"Did you ever get hurt?"

"Almost. My friend Darrell and I were diving off a cliff, and we ran into two huge manta rays. Darrell was so frantically trying to get away from them that he almost drowned me. When we got over our fright, we were intrigued by these two awesome animals. They were tremendous. I'll bet if you measured across them, they were ten feet each."

"How come you don't surf anymore?"

"I guess coming back and seeing how small the surf is here spoiled surfing for me."

"Did you ever go back?"

"No. Other responsibilities took over."

"Like me?"

"Like you."

"Do you want to go back?"

"Mmm. Yes. Your mom and I are going to take a vacation next Christmas, and we are thinking of going there."

"Can I go and go surfing?"

"I don't know. Can you?"

"You're a silly man. Let's start planning now. I don't want to lose my luggage," the girl says with a giggle. We turn away from the beach and get in the car. I think a trip to the surf shop is in order.

1. In the context of the passage, the word "awesome" means what?

- A. small
 - B. wide
 - C. large
 - D. level
2. Who is the man in the passage?
 - A. an uncle
 - B. a neighbor
 - C. the brother
 - D. the father
 3. Which of the following was discussed least in the passage?
 - A. surfing the Pipeline
 - B. the bat
 - C. making the money for the trip
 - D. Mom
 4. Where does the conversation between the girl and the man take place?
 - A. the Pipeline
 - B. the Bahamas
 - C. at home
 - D. the beach
 5. In what decade was the airplane in the story built?
 - A. 1980s
 - B. 1960s
 - C. 1940s
 - D. 1920s
 6. What was the reason that the man slept in a cave?
 - A. he had no tent
 - B. he loved caves
 - C. that was the only place to sleep
 - D. there was a flood
 7. Why did the girl say that the man is silly?
 - A. he stayed in a tent
 - B. he went to the Bahamas
 - C. he ate fried bananas
 - D. he teased her about the upcoming vacation
 8. What did the man see when he went diving from the cliffs?
 - A. sharks
 - B. dolphins
 - C. mantas
 - D. whales

Writing X What's Wrong, Anyway

General Review of Grammar

The following sentences contain problems or mistakes in grammar, usage, diction (choice of words), and idiom. Some sentences are correct. No sentence contains more than one error. You will find that the error, if there is one, is underlined and lettered. Assume that elements of the sentence that are not underlined are correct and cannot be changed. In choosing answers, follow the requirements of standard written English. If there is an error, select the one underlined part that must be changed to make the sentence correct and blacken the corresponding space on your answer sheet. If there is no error, blacken answer space "E."

Usage Questions: Basic Principles

No Error

Choice E-"No error"-is correct almost exactly one-fifth of the time. Don't waste a lot of time searching for errors where none exist.

What is Underlined

Remember that a part of the sentence that is not underlined may make something that is underlined incorrect. So don't simply focus on the words that are underlined.

Pronouns

Among the most common errors tested in usage problems are ones involving pronouns. Before you do anything else, make certain that all pronouns are correct. Here's an example:

When her and her friends went to the movie, they had trouble finding a place to park. No error
A B C D E

The correct answer is A. The "her" ought to be "she." You can always test pronouns by simplifying the sentence and seeing if it still sounds right. To simplify this sentence, leave out "and her friends." This gives you the following: "When her went to the movie."

Number

You should always determine whether the subject is singular or plural. Then check the verb. If the subject is plural, the verb must be plural as well. Here's an example:

The members of the steering committee, though relatively inexperienced, is doing a good job with planning. No error
A B C D E

The correct answer is C. The subject of the sentence is members, not committee, which means that the "is" should be "are."

Tense

Similarly, you must make certain that every verb in the sentence is in the proper tense. Here's an example:

When John plays tennis with his brother, he showed off by using his expensive new racket. No error.
A B C D E

The correct answer is A. Even though the clause "When John plays tennis with his brother" is perfectly grammatical by itself, it doesn't agree with the rest of the sentence. "Plays" should be "played" to agree with "showed off."

Adverbs

Keep an eye out for adjectives used in place of adverbs, and vice versa. Here's an example:

Lemonade, which had been a favorite of his, was forgotten with the rapid increasing number of Pepsi drinkers.
A B C D No Error E

The correct answer is D. "Rapid" should be "rapidly."

Ambiguity

Ambiguity is lack of clarity. Most often ambiguous sentences contain pronouns that have no clear antecedents (antecedents are the nouns that pronouns represent). This isn't much of a problem in spoken English, because we can usually figure out what pronouns represent by paying attention to context or the speaker's tone of voice. Not so in written English. When checking for this sort of mistake, play dumb. Don't guess what the writer meant or make up a context in which the sentence would be correct as written. Antecedents in the sentences must be clear. Here's an example:

Football and baseball are both popular sports, but it has too much violence for many people. No error.
A B C D E

The correct answer is B. The subject of the sentence is plural (football and baseball), but the pronoun is singular (it). You can't tell from the sentence whether "it" represents football or baseball. A corrected version of this sentence would read something like this: "Football and baseball are both popular sports, but football has too much violence for many people."

Diction, Usage, and Idiom

Some sentences are easy enough to understand but contain slight errors in word choice or usage. You don't need a big vocabulary to answer these questions correctly, but you do need to read carefully. A sentence might contain a word that is almost right, but not quite. Here's an example:

When the battle was over, the victorious soldiers rose their flag over the fort. No Error.
A B C D E

The correct answer is C. "Rose" should be "raised." Always pay close attention.

Writing Passages

Read each passage and determine the error. Correct answers are in the last section of the book.

Sample 1:

Wearing contact lenses can be a wonderful experience if you follow the proper procedures.

There are four steps you should follow to avoid problems with contacts. These steps include getting a complete eye exam, getting fitted for the lenses, take care of your lenses, and following up with the optometrist. (1)

The first step is the eye exam. You should make an appointment with the optometrist, and to tell them that you want to be fitted for contact lenses. This is because an appointment that includes contact lens fitting takes longer than a regular eye exam. The contact lens exam includes checking your vision and to measure the curvature of your eyes. Also, the doctor will discuss what type of contact lenses, hard or soft, are best suited to your needs. (2) (3)

The second step is the lens fitting. If you choose hard lenses, the measurement of the curvature of your eyes is critical. The lenses have to fit snugly to your eyes so they will stay in place. Hard lenses must be ordered; therefore, you will have to wait for the lenses to be manufactured before you can be sure they fit properly and the prescription is correctly. If you choose soft lenses, you have choices. You can choose those that last indefinitely, use you (4) (5) (6)

dispose of every two weeks, or those you dispose of daily. You can also choose lenses that you do not take out except once a week to clean or lenses you take out every night. It is important to remember that you should follow the advice of your doctor and get the type of lenses recommended for your needs.

The third step is taking care of your lenses. You should have a case for storage and the proper solutions for cleaning and to soak the lenses and for wetting the lenses before you insert them into your eyes. Hard lenses last longer but they cost more to maintain. You have to have one solution for cleaning, one for soaking, and another for wetting the lenses. Soft lenses that you can wear indefinitely cost more to maintain, too. You may have to buy a device that uses heat with a special solution to disinfect the lenses. You can also get soft lenses that only require a disinfecting enzyme soak. Lenses that are replaced every two weeks require one solution that rinses, soaks, disinfects, and wets the lenses. In the long run, lenses that are replaced every two weeks are the most cost-effective type that you can buy.

The fourth step is to follow up with the optometrist. Your optometrist will expect you to return to have the lenses checked, after you have worn them for about two or three weeks. This is to make sure they fit properly, the prescription is completely correct, and your eyes have adjusted properly to the lenses. After this check-up, you'll need to see the doctor every year for an exam. This check-up is to appraise your vision; and your prescription for contacts is only good for one year.

Contact lenses can give freedom and a new appearance to the wearer. Proper fitting and care can make the experience a good one and help prevent problems. Just remember, if you wear contacts and start having any kind of problem with them, call your optometrist immediately. It's your vision and it's your responsibility to protect it.

(14)

1. A. no change
B. took
C. taking
D. taken
2. A. no change
B. tell
C. taking
D. taken
3. A. no change
B. measure
C. measured
D. measuring
4. A. no change
B. lenses
C. lenses--
D. lenses.
5. A. no change
B. must
C. have
D. can
6. A. no change
B. okay
C. correct
D. correctingly
7. A. no change
B. day
C. by day
D. each day
8. A. no change
B. soak
C. soaked
D. soaking
9. A. no change
B. longer, but
C. longer; but
D. long but
10. A. no change
B. checked. After
C. checked after
D. checked; after
11. A. no change
B. youll
C. you ll
D. you
12. A. no change
B. vision and
C. vision. And
D. vision, and
13. A. no change
B. them. Call
C. them; call
D. them call
14. A. no change
B. vision, and it's
C. vision. And it's
D. vision; and it's
15. A. no change
B. your eyes
C. its
D. the doctor

Sample 2:

My grandmother was one of the most interesting persons that I have ever known. When she was a young woman in an age when few women worked outside the home she taught school. Later, after her children started school, she became the postmistress of a small North Carolina town. Not only was she a working woman, but she managed to have four children and one of the best cooks around. My earliest memories of my grandmother were when I was three years old. When I visited her, we went everywhere together. What an odd twosome we must have seemed to those who saw us together! She with her ramrod straight back and I grubby and freckled faced.

Grandmother Smith was never young to me. I remember her as being short and plump and having gray hair. She wore her hair short and got a perm every six months. One thing about her that was strange to me being that she always wore a corset. The thing was huge! It started just below her bust line and went down to the tops of her legs. It was an ugly, fleshy pink and had about a million stays that ran the whole length of it. She wore it summer and winter. It had garters for her hose, which she also wore every day. My grandma was always impeccably groomed. Never a stray hair for her. She even carried extra hose in her purse in case she got a run.

She worked from 7:00 A.M. until 11:00 A.M. Monday through Friday then came home to cook lunch for Granddad. At 1:00 P.M. she would go back and work until 5:00 P.M. then come home and prepare supper. Saturdays she had a part-time person come in to run the Post Office. As postmistress of Atkinson, NC, she sorted all the mail, accepted mailings, sold stamps, and made sure the right people got their mail. Not that this was necessarily a hard job, but it was one that was critically important to the people of a small town.

I loved my grandmother with a passion. I went to visit at least one weekend a month and during the summer, I stayed with my grandparents for two solid weeks. My memories of her are still as vivid as the days the events actually happened.

One of the memories I have is her teaching me to make biscuits. I was too small to see over the table she used to make biscuits, so she had a stool for me to stand on. She would have a separate ball of dough for me. Because my hands were not all that clean and my biscuit men were always slightly gray. I made biscuit men while she made the lightest, fluffiest biscuits I have ever put in my mouth. My mouth waters just thinking about eating one of those heavenly delights. Although she used lard to make her biscuits, they were never greasy. Grandma's biscuits were small. She used a metal measuring cup with the bottom cut out for a biscuit cutter. She could whip up a batch of buttermilk biscuits in no time at all. In the kitchen, she was a whirling tornado

of activity. Today, I'm known to my friends and relatives as the inheritor of Grandma's wonderful biscuit recipe. Mine will melt in your mouth too.

The saddest thing for me is that I was away from North Carolina and at odds with her at the time of her death. You know how twenty years old, know it all's are. I still miss her terribly, and tears come to my eyes because I never had that one last time to tell her how much I loved her. I guess all things happen for a reason, and I learned a valuable lesson. Never, never let anger keep you from telling loved ones how much they mean to you. Never leave without telling them you love them. You never know it may be the last time you see them.

(15)-Question relating to the ⁽¹⁴⁾ passage as a whole.

1. A. no change
B. folks
C. old ladies
D. women
2. A. no change
B. home; she
C. home, she
D. home. She
3. A. no change
B. and being one
C. and is one
D. and was one
4. A. no change
B. She had a ramrod, straight back, and I had a grubby, freckled face.
C. She had a ramrod, straight back and I a grubby freckled face.
D. She had a ramrod, straight back, and I a grubby freckled face.
5. A. no change
B. it permed
C. had it permed
D. was permed
6. A. no change
B. me--she
C. me was that she
D. me that she
7. A. no change
B. ugly flesh
C. ugly-flesh
D. ugly; flesh
8. A. no change
B. Never was a stray hair for her.
C. She never had a stray hair.
D. For her, never a stray hair.
9. A. no change
B. At 1:00 P.M..
C. At 1:00 P.M.;
D. At 1:00 P.M.,
10. A. no change
B. month, and during
C. month--and during
D. month; and during
11. A. no change
B. Because my hands were not all that clean, and my biscuit men were always gray.
C. Because my hands were not all that clean, my biscuit men were always gray.
D. Because my hands were not all that clean; and my biscuit men were always gray.
12. A. no change
B. omit
C. You know twenty year old, know it all are.
D. Twenty years olds are know it alls.
13. A. no change
B. terribly; and

- C. terribly. And
 - D. terribly and
14. A. no change
- B. know, it
 - C. know; it
 - D. know—it

15. Suppose the writer wanted to add the following sentence to the passage:
"As a child, it did not matter that we were different, because I loved my Grandmother very much."

The writer would most logically place the sentence at the end of paragraph

- A. 1
- B. 2
- C. 3
- D. 4

Tests of Mathematical Skills

Most of us can not work out all the problems in the given time. You are being tested to see if you know how to solve various problems, not to see if you can solve difficult problems. Always check the answer choices to see what mathematical skills you need to use. Use this three-step method:

Step 1: Go through and mark answers to the problems you can do in your head.

Step 2: Go through and compute the problems you know how to do in your head.

Step 3: Compute the problems that take the longest amount of time to do, and those that you are not sure of your ability to solve. Check your answer choices for hints on how to solve.

Remember you may be able to eliminate one, two, or even three of the choices.

- Allot your time. You have about one-half of a minute to do each problem.
- Leave no blanks. Use the last minute before time is called to make educated guesses on the problems you have not finished.
- Use your scratch paper to your advantage. Try not to recopy problems on your scratch paper.

Example: $6.5 =$ A. $65/100$ B. $65/1$ C. $13/2$ D. $15/2$

On your scratch paper, write the conversion to $65/10$ and then reduce to $13/2$. This is answer C. You will find the correct answers with solutions in the last section of this book.

Test of Numerical Skills

Sample problems:

1. $15 \times 11 = ?$
 - A. 150
 - B. 165
 - C. 155
 - D. 151
 - E. none of the above
2. $84 \div 7 = ?$
 - A. 9
 - B. 10
 - C. 13
 - D. 11
 - E. none of the above
3. $3/5 + 1/2 = ?$
 - A. $4/7$
 - B. $3/10$
 - C. $1 \frac{1}{5}$
 - D. $1 \frac{1}{10}$
 - E. none of the above
4. $8 - 5/8 = ?$
 - A. $26/8$
 - B. $7 \frac{5}{8}$
 - C. $8 \frac{5}{8}$
 - D. $6 \frac{3}{8}$
 - E. none of the above
5. $1 \frac{3}{4} \times 3 \frac{1}{7} = ?$
 - A. $154/28$
 - B. $5 \frac{1}{2}$
 - C. $4 \frac{2}{7}$
 - D. $5 \frac{14}{28}$
 - E. none of the above

6. $9 \div \frac{3}{4} = ?$
A. 12
B. $\frac{27}{4}$
C. $6 \frac{3}{4}$
D. 14
E. none of the above
7. $21.34 + 3.769 = ?$
A. 5.903
B. 25.109
C. 59.03
D. 24.109
E. none of the above
8. $0.96 - 0.0043 = ?$
A. 0.53
B. 0.9566
C. 0.9557
D. 0.917
E. none of the above
9. $4 \times 3.25 = ?$
A. 12.25
B. 14
C. 1.3
D. 13.25
E. none of the above
10. $32 \div 0.002 = ?$
A. 16,000
B. 1,600
C. 160
D. 16
E. none of the above
11. 5% of 75 = ?
A. 3.75
B. 37.5
C. 0.375
D. 375
E. none of the above
12. ?% of 25 = 50
A. 2%
B. 20%
C. 0.2%
D. 30%
E. none of the above
13. 25% of ? = 6
A. 2.4
B. 24
C. 240
D. 25
E. none of the above
14. A two by ten piece of board is 3 yards 2 feet and 8 inches in length. What is its length in feet?
A. $9 \frac{1}{3}$
B. $11 \frac{1}{3}$

- C. $9\frac{2}{3}$
 D. $11\frac{2}{3}$
 E. none of the above
15. The total amount of fence needed to go around a yard is 1200 feet. The length is twice the width. Find the length and width.
 A. $l = 300, w = 150$
 B. $l = 200, w = 300$
 C. $l = 400, w = 200$
 D. $l = 300, w = 400$
 E. none of the above
16. On five tests, Jill made the following scores: She scored 75 on two tests, 80 on one test, 85 on one test, and 60 on one test. What is her average test grade?
 A. 65
 B. 70
 C. 77
 D. 80
 E. none of the above
17. A twenty foot tree casts a forty foot shadow. At the same time, a house casts an eighty foot shadow. How high is the house? (Note: the ground is level and both the tree and the house are perpendicular to the ground.)
 A. 40 feet
 B. 45 feet
 C. 50 feet
 D. 55 feet
 E. none of the above
18. A farm valued at \$200,000 is assessed for $\frac{3}{4}$ of its value. If the property tax levy is \$2.50 per \$100 of assessed value per year, what is the yearly property tax bill?
 A. \$3750
 B. \$375
 C. \$300
 D. \$37.50
 E. none of the above
19. A dressmaker has a piece of fabric 2 yards $1\frac{1}{2}$ feet long. She needs 1 yard $2\frac{1}{4}$ feet to make a dress. How much fabric will be left after she cuts off the material for the dress?
 A. 2 yd
 B. $2\frac{1}{2}$ yd
 C. 1 yd
 D. $1\frac{3}{4}$ yd
 E. none of the above
20. If the price of a \$45 dress is reduced by 25%, how much sales tax must be paid on the dress in a state having a 6% sales tax?
 A. \$203
 B. \$20.30
 C. \$2.02
 D. \$2.03
 E. none of the above
21. A driver is traveling to a city 30 miles away. If she covers 1.25 miles in one minute, what is the average rate of speed in miles per hour?
 A. 45 mph
 B. 55 mph
 C. 65 mph
 D. 75 mph

- E. none of the above
22. What is the prime factorization of 120?
- (2)(60)
 - (2)(2)(33)
 - (2)(2)(2)(3)(5)
 - (3)(3)(5)(5)
 - none of the above
23. If the 3-digit number 39b, in which b is the one's digit, is evenly divisible by both 4 and 7, what is the value of b?
- 0
 - 2
 - 4
 - 6
 - 8
24. Which of the following is false?
- $|36 - 12| = |12 - 36|$
 - If $a = -9$, then $|a| = -a$
 - $0 - |5| = 0 - 5$
 - If $a = 3$, then $|a| > -a$
 - $|-2| = -|2|$
25. If $c = 2^2 \cdot 3^3 \cdot 7^2$ and $d = 3^2 \cdot 5 \cdot 7 \cdot 11$, what is the largest integer that is a divisor of both c and d?
- $2 \cdot 3 \cdot 7$
 - 3^2
 - $3 \cdot 5$
 - $3^2 \cdot 7$
 - $2^2 \cdot 3^3 \cdot 5 \cdot 7^2 \cdot 11$
26. $7645 = ?$
- 764.5×10^4
 - 76.45×10^5
 - 7.645×10^3
 - 0.7645×10^{-3}
 - none of the above
27. $\frac{1.4382 \times 10^4}{4.7 \times 10^{-1}} = ?$
- 3.06
 - 3.06×10^2
 - 3.06×10^4
 - 3.06×10^{-2}
 - none of the above

28. Which of the following does NOT equal $\frac{3}{-4}$?

A. $-\frac{3}{4}$

B. $\frac{-3}{4}$

C. $-\frac{-3}{4}$

D. $-\frac{-3}{-4}$

E. none of the above

Test of Elementary Algebra

Sample Problems:

1. $(2.2 \times 10^{-3})(3 \times 10^{-5}) = ?$

A. 4.67×10^{-2}

B. 6.6×10^{-15}

C. 6.6×10^{-8}

D. 6.6×10^{-2}

E. 6.6×10^{15}

2. If $n = 3$, what is the value of the expression $4 - 5n - 6$?

A. 17

B. 25

C. -17

D. -25

E. 14

3. The product of 2 numbers is 3 less than the difference between the first number and the second number. If the first number is 10 and the other is n , which of the following equations could be used to find n ?

A. $10n = (10 + n) - 3$

B. $10n = (n + 10) + 3$

C. $10n = (10 - n) - 3$

D. $10n = (n - 10) - 3$

E. $10n = (n - 10) + 3$

4. What is the value of the expression $2x^2 - 4xy + y^2$ when $x = 2$ and $y = -2$?

A. 24

B. -24

C. 28

D. 16

E. -16

5. If $3n - 5 = 4$, then $n = ?$

A. $n = -9$

B. $n = -3$

C. $n = +9$

D. $n = +1$

E. $n = +3$

6. If $24 + 3x - 36 - x = -20$, then $x = ?$
- 16
 - 16
 - 6
 - 4
 - 4
7. For which of the following products is 3 a factor?
- 24×27
 - 25×25
 - 4×36
- I only
 - I and II only
 - I and III only
 - II and III only
 - I, II and III
8. Which of the following equals the set of all solutions for the inequality $24 - \frac{3}{5}x > 21 = ?$
- $\{x < 5\}$
 - $\{x > 5\}$
 - $\{x < -3\}$
 - $\{x > -3\}$
 - $\{x < 7\}$
9. For all b and d , $(4b - d)(b + 3d) = ?$
- $4b^2 + 3d^2$
 - $4b^2 - 3d^2$
 - $4b^2 + 13bd - 3d^2$
 - $4b^2 - 11bd - 3d^2$
 - $4b^2 + 11bd - 3d^2$
10. For all integers m , n , x , and y , which of the following is a factored form of $mx + my + nx + ny$?
- $(m + n)(x + y)$
 - $(mx + my) + (nx + ny)$
 - $(m + x)(n + y)$
 - $(mx)(ny)$
 - $(nx)(my)$
11. For all x and y , $(3x - 2y)(x + 3y) = ?$
- $3x^2 - 6y^2$
 - $3x^2 - 2xy - 6y^2$
 - $3x^2 + 9xy + 6y^2$
 - $3x^2 + 7xy - 6y^2$
 - $3x^2 + 7x^2y^2 - 6y^2$
12. If a and b are any positive real numbers, then $(\sqrt{16a^3b^4})(\sqrt{18a^2b}) = ?$
- $6a^2b\sqrt{a^3b^3}$
 - $12a^2b^2\sqrt{2ab}$
 - $4ab\sqrt{6ab^5}$
 - $10a^2b\sqrt{3a^2b}$

13. Which of the following is one of the factors of the polynomial $3x^2 + 3x - 6$?
- $x - 2$
 - $3x + 3$
 - 2
 - $3x + 2$
 - $x + 2$
14. For all $b \neq 3$, $(b^4 - 81) \div (b - 3) = ?$
- $b - 3$
 - $(b^2 - 2)$
 - $(b - 2)^2$
 - $b^2 + 12b + 27$
 - $b^3 + 3b^2 + 9b + 27$
15. Simplify $\frac{4c^3 - 10c^2 - 14c}{4c^3 - 49c}$
- $\frac{2c - 2}{2c + 7}$
 - $\frac{7c + 2}{7 - 2c}$
 - $\frac{2c + 2}{2c + 7}$
 - $\frac{4c - 2}{2c + 7}$
 - $\frac{2c + 2}{7 - 2c}$
16. From 5 times a certain number (N), 3 times the number is subtracted, and the resulting integer is 6 units less than the original number. Which of the following equations can be used to find N?
- $-3N + 5N = -6 + N$
 - $3N - 5N = N + 6$
 - $-5N + 3N = -N + 6$
 - $5N + 3N = N - 6$
 - $5N - 3N = N + 6$

Test of Intermediate Algebra

Sample Problems:

You need to be able to correctly answer all of the problems in the Elementary Algebra section to complete the problems given in this section.

- If $a + b = 5$ and $a - b = 7$, then ab equals which of the following?
 - 12
 - 12
 - 6
 - 6
 - 1
- For what integer(s) c is the statement $2c + 4 = 2(c + 2)$ true?
 - All integers
 - No integers
 - Only 0
 - Only positive integers and 0
 - Only negative integers

3. For what value of m does $\sqrt{(8)} + m = \sqrt{20} + \sqrt{5}$?
- A. $\sqrt{5}$
 - B. $\sqrt{10}$
 - C. $\sqrt{5} - \sqrt{2}$
 - D. $\sqrt{5} - 2\sqrt{2}$
 - E. $3\sqrt{5} - 2\sqrt{2}$
4. Which of the following expressions describes all real values for x that are solutions for the inequality $3x + \frac{2}{3} \geq 2x - 4$?
- A. $x \geq \frac{7}{3}$
 - B. $x \geq \frac{-7}{3}$
 - C. $x \geq 3$
 - D. $x \geq \frac{14}{3}$
 - E. $x \geq \frac{-14}{3}$
5. Jack and Mary have a combined total of 200 CDs, and Mary has 20 more than three times as many as Jack. How many CDs does Jack have?
- A. 60
 - B. 50
 - C. 45
 - D. 40
 - E. 35
6. If $3x + 1 = y$ and $y = 6z + 10$, which of the following is equal to x ?
- A. $3z + 4$
 - B. $2z + 4$
 - C. $2z + 3$
 - D. $3z - 3$
 - E. $3z - 3$
7. If $(2 \bullet 2^2) + (3 \bullet 5^2) + 2 = (a \bullet 4^3) + b + (c \bullet 5)$, where a , b , and c are integers between 0 and 8, what are the values of a , b , and c ?
- A. $a = 1, b = 5, c = 3$
 - B. $a = 1, b = 6, c = 3$
 - C. $a = 2, b = 0, c = 3$
 - D. $a = 2, b = 6, c = 4$
 - E. $a = 2, b = 5, c = 4$

8. Which of the following expressions describes all real values of x that are solutions for the inequality $|x - 2| < 4$?
- A. $-2 < x < 6$
 - B. $-4 < x < 6$
 - C. $-2 < x < 4$
 - D. $2 < x < 6$
 - E. $2 < x < -6$

9. What is the distance between the points with (x,y) coordinates $(2,3)$ and $(-4, -5)$?
- A. $\sqrt{10}$
 - B. $\sqrt{2}$
 - C. 10
 - D. 4
 - E. 2

10. If (a,b) are the (x,y) coordinates of any point in the shaded rectangular region in Figure 1, or on its boundary, what is the smallest value of $\frac{1}{2a+b}$?
- A. $1/3$
 - B. $1/4$
 - C. $1/5$
 - D. $1/6$
 - E. $1/9$

11. If x is not equal to -2 , then $\frac{(x^2 + 5x + 6)}{x + 2}$ equals which of the following?
- A. $-x + 3$
 - B. $x + 3$
 - C. $x - 3$
 - D. $-x - 3$
 - E. $5x - 6$

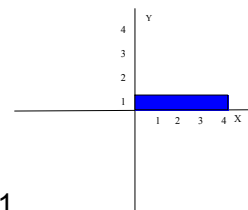
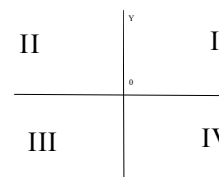


Figure 1

12. What is the slope of the line defined by the equation $2y - x - 4 = 0$?
- A. $\frac{1}{2}$
 - B. $\frac{1}{3}$
 - C. $\frac{1}{4}$
 - D. 2
 - E. 4

13. In which quadrants of the coordinate plane in Figure 2 will the graph of $y^2 = x + 4$ lie?
- A. I, II, III
 - B. I, III, IV
 - C. II, III, IV
 - D. I, II, IV
 - E. I, II, III, IV

Figure 2:



14. Billy earns x dollars per week. His employer deducts 14.2% of his salary for federal income tax, 6.3% for state income tax, and 4.5% for FICA tax. From his paycheck, he also has \$50.00 deducted each week to repay a loan. For all values of x , which of the following represents Billy's weekly take-home pay after these required deductions?

- A. $x - (-5 - .25x)$
- B. $x + (.25x - 50)$
- C. $x - (-.25x - 50)$
- D. $x - (.25x + 50)$
- E. $x + (50 - .25x)$

15. At what point do the lines that are the graphs of the equations $2x - 3y = -12$ and $3x + y = -7$ intersect?

- A. $(-3, 2)$
- B. $(3, -2)$
- C. $(2, -4)$
- D. $(-2, -4)$
- E. $(-2, 4)$

16. Which of the following systems of equations does NOT have a solution ?

- A. $y - 3x = 5$
 $2y - x = 4$
- B. $y - 2x = 4$
 $4x - 2y = -5$
- C. $2y + 6x = 11$
 $y - x = 3$
- D. $4x - 2y = 3$
 $2x + 3y = 6$
- E. $x + 4y = -1$
 $2x - y = 3$

Answers & Solutions

Reading

Sample 1

1. C
2. C
3. B
4. C
5. D
6. A
7. D
8. B

Sample 2

1. C
2. D
3. A
4. D
5. D
6. C
7. D
8. B

Sample 3

1. C
2. D
3. A
4. D
5. C
6. A
7. D
8. C

Writing

Sample 1

1. C
2. B
3. D
4. A
5. B

6. C
7. D
8. D
9. B
10. C

11. C
12. D
13. A
14. B
15. B

Sample 2

1. D
2. C
3. D
4. B
5. C

6. C
7. A
8. C
9. D
10. B

11. C
12. B
13. A
14. C
15. A

Mathematics

Numerical Skills

1. B. 15

$$\begin{array}{r} \text{X } 11 \\ 15 \\ +15 \\ \hline 165 \end{array}$$

2. E. $7 \overline{)84}$

$$\begin{array}{r} 12 \\ 7 \overline{)84} \\ \underline{-7} \\ 14 \\ \underline{-14} \\ 0 \end{array}$$

3. D. $3/5 + 1/2 = 6/10 + 5/10 = 11/10 = 1 \frac{1}{10}$

4. E. $8 - \frac{5}{8} = 7\frac{8}{8} - \frac{5}{8} = 7\frac{3}{8}$

B. $1\frac{3}{4} \times 3\frac{1}{7} = \frac{7^1}{4^2} \times \frac{22}{7} \frac{11}{1} = 11/2 = 5 \frac{1}{2}$

6. A. $9 \div \frac{3}{4} = \frac{9}{1} \div \frac{3}{4} = \frac{9^3}{1} \times \frac{4}{3^1} = 3 \times 4 = 12$

$$\begin{aligned}
22. \text{ C. } & 120 \div 2 = 60 \\
& 60 \div 2 = 30 \\
& 30 \div 2 = 15 \\
& 15 \div 3 = 5 \\
& 5 \div 5 = 1 \\
& (2)(2)(2)(3)(5) = 120
\end{aligned}$$

$$23. \text{ B. } 4 \times 7 = 28$$

$$\begin{array}{r}
14 \\
28 \overline{)39b} \\
\underline{-28} \\
112 \text{ (b)} \\
\underline{112}
\end{array}$$

b must be 2 for the number 39b to be divisible by both 4 and 7

$$\begin{aligned}
24. \text{ E. } & |24| = |-24| & 24 = 24 \\
& |-9| = -(-9) & 9 = 9 \\
& 0 - (5) = 0 - 5 & -5 = -5 \\
& |3| > -(3) & 3 > 3 \\
& 2 = -(2) & 2 = -2? \quad \text{No, 2 is not equal to -2.}
\end{aligned}$$

$$25. \text{ D. } \cancel{(2)}\cancel{(2)}(3)(3)\cancel{(3)} \quad \cancel{(7)}\cancel{(7)}$$

$$(3)(3) \quad \cancel{(5)}(7) \quad \cancel{(11)}$$

Cross out all factors that are not common to both numbers and multiply (3)(3)(7) to get the answer.

$$26. \text{ C. } 7645 = 764.5 \times 10 = 76.45 \times 100 = 7.645 \times 1000 = 7.645 \times (10)(10)(10) \text{ or } 7.645 \times 10^3$$

$$27. \text{ C. } .47 \overline{)14382} = 47 \overline{)1438200} = 3.06 \times 10^4$$

28. C. C is correct because it has an even number of negative signs making the value positive. If there are an odd number of negative signs the value is negative.

Elementary Algebra

$$1. \text{ C. } (2.2)(3)(10^{-3})(10^{-5}) = (6.6)(10^{-3-5}) = 6.6 \times 10^{-8}$$

$$2. \text{ C. } 4 - 5(3) - 6 = 4 - 15 - 6 = 4 - 21 = -17$$

$$\begin{aligned}
3. \text{ C. } & \text{Product} = \text{difference} - 3 \\
& 1^{\text{st}} \text{ number} = 10 \\
& 2^{\text{nd}} \text{ number} = n \\
& \text{Product} = 10 \times n \\
& \text{Difference} = 10 - n \\
& \text{Equation must be } 10n = (10 - n) - 3
\end{aligned}$$

$$\begin{aligned}
4. \text{ C. } & 2(2)^2 - 4(2)(-2) + (-2)^2 = \\
& 2(4) - 4(-4) + (4) =
\end{aligned}$$

$$8 + 16 + 4 = 28$$

$$5. E. \begin{aligned} 3n - 5 &= 4 \\ + 5 &= + 5 \\ \hline \frac{3n}{3} &= \frac{9}{3} \\ n &= 3 \end{aligned}$$

$$6. E. \begin{aligned} 24 - 36 + 3x - x &= -20 \\ - 12 + 2x &= -20 \\ + 12 &= + 12 \\ \hline 2x &= -8 \\ \frac{2x}{2} &= \frac{-8}{2} \\ x &= -4 \end{aligned}$$

$$7. C. \begin{aligned} I. & (2 \times 2 \times 2 \times 3) \times (3 \times 3 \times 3) \\ II. & (5 \times 5) \times (5 \times 5) \\ III. & (2 \times 2) \times (2 \times 2 \times 3 \times 3) \\ & I \text{ \& III only} \end{aligned}$$

$$8. A. \begin{aligned} 24 - \frac{3x}{5} &> 21 \\ - \frac{24}{5} &= - \frac{24}{5} \\ - \frac{3x}{5} &> -3 \\ (5/-3) \cdot (-3/5)X &> (-3/1) \cdot (5/-3) \\ X &< 5 \end{aligned}$$

$$9. E. \begin{aligned} & 4b - d \\ & \frac{x b + 3d}{12bd - 3d^2} \\ + \frac{4b^2 - bd}{4b^2 + 11bd - 3d^2} \end{aligned}$$

$$10. A. \begin{aligned} (mx + my) + (nx + ny) \\ m(x + y) + n(x + y) \\ (m + n)(x + y) \end{aligned}$$

$$11. D. \begin{aligned} 3x - 2y \\ \frac{x + 3y}{9xy - 6y^2} \\ + \frac{3x^2 - 2xy}{3x^2 + 7xy - 6y^2} \end{aligned}$$

$$12. B. \begin{aligned} & \sqrt{16 \cdot 18 \cdot a^3 \cdot a^2 \cdot b^4 \cdot b} \\ & \sqrt{4 \cdot 4 \cdot 3 \cdot 3 \cdot 2 \cdot a^5 \cdot b^5} \\ & 4 \cdot 3 \cdot a^2 \cdot b^2 \cdot \sqrt{2ab} \\ & 12 a^2 b^2 \sqrt{2ab} \end{aligned}$$

$$13. E. 3x^2 + 3x - 6 = 3(x - 1)(x + 2)$$

$$\begin{aligned}
 14. E. & (b^4 - 81) \div (b - 3) \\
 & [(b^2 + 9)(b^2 - 9)] \div (b - 3) = \\
 & [(b^2 + 9)(b + 3)\cancel{(b - 3)}] \div \cancel{(b - 3)} = \\
 & (b^2 + 9)(b + 3) = b^3 + 3b^2 + 9b + 27
 \end{aligned}$$

$$\begin{aligned}
 15. C. & \frac{4c^3 - 10c^2 - 14c}{4c^3 - 49c} = \\
 & \frac{c(4c^2 - 10c - 14)}{c(4c^2 - 49)} = \\
 & \frac{\cancel{c}(2c - 7)(2c + 2)}{\cancel{c}(2c - 7)(2c + 7)} = \\
 & \frac{2c + 2}{2c + 7}
 \end{aligned}$$

$$\begin{aligned}
 16. A. & 5N - 3N = N - 6 \\
 & -3N + 5N = -6 + N
 \end{aligned}$$

Intermediate Algebra

$$\begin{aligned}
 1. C. & a + b = 5 & (6) + b = 5 \\
 & \frac{a - b = 7}{2a = 12} & \frac{6 + b = 5}{-6 = -6} \\
 & a = 6 & b = -1 \\
 & ab = (6)(-1) = -6
 \end{aligned}$$

2. A. No value you assign to c will change the equation, so "all integers" is the correct answer.

$$\begin{aligned}
 3. E. & \sqrt{8} + m = \sqrt{20} + \sqrt{5} \\
 & m = \sqrt{20} + \sqrt{5} - \sqrt{8} \\
 & m = \sqrt{4 \cdot 5} + \sqrt{5} - \sqrt{4 \cdot 2} \\
 & m = 2\sqrt{5} + \sqrt{5} - 2\sqrt{2} \\
 & m = 3\sqrt{5} - 2\sqrt{2}
 \end{aligned}$$

$$\begin{aligned}
 4. E. & 3X + 2/3 > 2x - 4 \\
 & \frac{-2/3 = -2/3}{3X > 2X - 4 \ 2/3} \\
 & \frac{-2X = -2X}{X > -4 \ 2/3} \\
 & X > -14/3
 \end{aligned}$$

$$\begin{aligned}
 5. C. & \text{Jack} = x & \text{Mary} = 3x + 20 \\
 & \text{Combined: } x + 3x + 20 = 200 \\
 & 4x + 20 = 200 \\
 & \frac{-20 = -20}{4x = 180} \\
 & \frac{-4x = -180}{4} \\
 & x = 45
 \end{aligned}$$

$$\begin{aligned}
 6. C. & 3x + 1 = 6z + 10 \\
 & \frac{-1 = -1}{3x = 6z + 9}
 \end{aligned}$$

$$\frac{3x}{3} = \frac{6z + 9}{3}$$

$$\frac{3x}{3} = \frac{3(2z + 3)}{3}$$

$$x = 2z + 3$$

7. B. $8 + 75 + 2 = 64a + b + 5c$
 $85 = 64(1) + b + 5c$
 $85 = 64 + 6 + 5c$
 $85 = 70 + 5(3)$
 $85 = 70 + 15$
 $85 = 85$
 $a = 1, b = 6, c = 3$

8. A. $|x - 2| < 4$
 $-4 < x - 2 < 4$
 $\frac{+2}{-2} = \frac{+2}{+2}$
 $-2 < x < 6$

9. C. $\frac{y_2 - y_1}{x_2 - x_1} = \frac{-5 - 3}{-4 - 2} = \frac{-8}{-6}$
 $c^2 = a^2 + b^2$
 $c^2 = (-8)^2 + (-6)^2$
 $c^2 = 64 + 36$

$$\sqrt{c^2} = \sqrt{100}$$

$$c = 10$$

10. E. $\frac{1}{(2.4) + 1} =$
 $\frac{1}{8 + 1} =$
 $\frac{1}{9}$

11. B. $\frac{(x^2 + 5x + 6)}{(x + 2)} =$
 $\frac{(x + 3)(x + 2)}{(x + 2)} =$
 $x + 3$

12. A. $2y - x - 4 = 0$
 $+ x + 4 = + x + 4$
 $\frac{2y}{2} = \frac{x + 4}{2}$

$y = 1/2x + 2$ The slope is therefore equal to $1/2$.

13. E. Use substitution to find sets of points. Let $x = 1$ and 0 . Let $y = 1$ and 0 too.

