

#### Alvin Webb, Jr. Student Success Coach Student Success Initiatives

TEAS MATH TEST PREP

### Starting the exam

- Gathering knowledge of the truth is the best preparation for tests.
  - Hours of concentrated, effective study help to carefully place facts into your memory. This is the best way to prepare for any test.
  - However, teachers often try to test your memory of the material by slightly altering it. In this case, practice and some test-taking skill will help.
- Always arrive early and take a moment to relax and reduce anxiety.
  - This brief time period will boost your confidence.
  - Use this time to focus your mind and think positive thoughts.
- Listen attentively to last minute instructions given by the instructor.
  - Teachers often make last minute changes.
  - Missing instructions can cause extreme anxiety.

### Starting the exam

- Read the test directions very carefully and watch for details.
  - You may find that one answer may be possible on multiple choice tests.
  - A key detail may require that you choose only three out of the five essay questions.
- Plan how you will use the allotted time.
  - Estimate how many minutes you will need to finish each test section.
  - Determine a pace which will ensure completing the whole test on time.
  - Start with the easiest sections to build your confidence.
- Maintain a positive attitude.
  - Don't let more difficult questions raise your anxiety and steal your valuable time. Move on and find success with other questions.
  - Avoid watching for patterns. Noticing that the last four answers are "c," is not a good reason to continue with that pattern.

### Starting the exam

#### • Rely on your first impression.

- The answer which comes to mind first is often correct.
- Nervously reviewing questions and changing answers can do more harm than good.

#### • Plan to finish early and have time for review.

- Return to difficult questions you marked for review.
- Proofread your essays and pay attention to grammar and spelling.
- Make sure you answer all the questions. Many students have failed to notice questions on the back side of the paper.
- Consider every test a practice session analyze your performance.
  - Test taking is an art which needs refinement. One can not refine the art without practice and serious evaluation.
  - Go through each test thoroughly and see if your plan worked.
  - Look at each section to identify your fault patterns. Do you need to work on true/false, multiple choice, or essay questions?
  - Talk to teachers regarding low scores, especially on essays.



- When you do not know the answer. Mark it true!
  - There are generally more true questions on true-false exams than false questions.
  - Instructors find it difficult to make a false statement look true.
  - Specific detail in the statement may also tend to make it true. For example, the statement "Babe Ruth hit 60 home runs in one season" has specific detail and is more likely to be true.
- Look for any factor that will make a statement false.
  - It is easy for the instructor to add a false part to an otherwise true statement.
  - Students often read the question and see some truth and quickly assume that the entire statement is true. For example, "Water boils at 212 degrees in Denver." Water boils at 212 degrees, but not at Denver's altitude.



#### Look for extreme modifiers that tend to mark the question false.

Extreme modifiers, such as always, all, never, or only make it more likely that the question is false. Here is a more complete list of EXTREME modifiers.

- all
- best
- none
- absolutely
- always
- never

- worst
- absolutely not
- only
- nobody
- everybody
- certainly

- invariably
- no one
- everyone
- certainly not



#### Qualifying words tend to make a question true.

Qualifiers (seldom, often, many) increase the likelihood that the statement is true. Here is a more complete list of QUALIFIERS.

- usually
- some
- probably
- might
- sometimes
- unlikely

- frequently
- seldom
- a majority
- a few
- much

- often
- many
- apt to
- may
- most



- Negative words or prefixes complicate the statement.
  - The prefixes (un-, im-, miss-) will alter the meaning of the statement.
  - Double negative make a positive. For example "not uncommon" actually means common.
- Questions that state a reason tend to be false.
  - Words in the statement that cause justification or reason (since, because, when, if) tend to make the statement false.
  - Pay close attention, the reason that is given may be incorrect or incomplete.
- There is no substitute for the truth.
  - Concentrated hours of study is the best way to prepare true-false questions.
  - Teachers, however, often try to test your memory of the material by slightly altering it.



## Guidelines for Answering Multiple-choice Questions

- Formulate your own answer before reading the options.
  - Focus on finding an answer without the help of the alternatives.
  - This process will increase your concentration.
  - Doing this will help you exercise your memory.
- Eliminate unlikely answers first.
  - Quickly eliminating two alternatives may increase your probability to 50/50 or better.
  - Use the true-false methods described earlier and find the false alternative.
- Select numbered answers from the middle range, not the extremes.
  - For example, if the height of a mountain is requested, eliminate 20,000 feet (high), and 3,000 feet (low). Then choose between 8,000 feet and 11,000 feet.



## Guidelines for Answering Multiple-choice Questions

- Select answers that are longer and more descriptive.
  - Longer (true) answers stand out and contain more detail.
  - Shorter (false) answers are created quickly as throwaways.
  - Descriptive detail is given to help you identify the truth.
- Similar answers give you a clue! One of them is correct, the other is disguised.
- Watch out for "NOT TRUE."
  - Remember to reverse your procedure and eliminate truth.
  - Use the true-false methods described earlier and find the false alternative.



## Guidelines for Answering Matching Questions

- Examine both lists to determine the types of items and their relationships.
  - Remember the test maker may be testing to see if you have mastered terms.
  - Look completely through both lists to become familiar with the words, build your confidence and enhance your memory of key words or phrases.
- Use one list as a starting point and go through the second list to find a match.
  - This process organizes your thinking and promotes memory.
  - As you become familiar with the second list, you will be able to go straight to a match that you saw when looking through the lists a previous time.



### Guidelines for Answering Fill-in-the-blank Questions

- Concentrate on the number of blanks in the sentence and the length of the space.
  - The test maker is giving you clues to the answer by adding spaces and making them longer.
- Provide a descriptive answer when you can not think of the exact word or words.
  - The instructor will often reward your effort with partial credit.



### Guidelines for Essay Questions

- Organize your thoughts before you begin to write.
  - A short outline on a separate piece of paper will improve your essay.
  - Write the topics and the key introductory words.
- Paraphrase the original question to form your introductory statement.
  - This process helps you get the question straight in your mind.
  - Restating the question allows the teacher to see how you understood the question. Perhaps you
    understood it to mean something other than what the teacher intended.
- Use the principles of English composition.
  - Form a clear thesis statement (statement of purpose) and place it as near to the beginning as possible.
  - Provide clear explanations to back up the main concept.
  - Remember, a complete answer usually has a main idea, supporting details and illustrative examples.

### Guidelines for Essay Questions

#### • Write clearly! Teachers need to be able to read it.

- Making teachers work hard to read lowers your grade.
- Print clearly, using a dark-colored erasable ball point pen.
- Avoid crossing out words or sentences, and don't smudge your paper.
- Remember to save some space for a brief but adequate summary.
- Use lists or bullets wherever possible.
  - Numbers or bullets allow the teacher to easily see your points.
  - Never bury your lists or key points in the middle of a paragraph.
  - If you must use a long paragraph, underline your key points.
- Identify the verbs or words in the question that give you direction.
  - Key words in each question describe the task you are expected to complete.
  - Circle the direction words in the question to make sure that you are focusing on the desired task.



### ATI TEAS: The actual exam

- Subject:
- # Questions:
- % of test questions:
- Time given:
- Each question:

Math 36 22% 54 minutes About 1 minute 30 seconds

23 questions Number and Algebra, 9 questions Measurement and Data, 4 Pretest Items



#### **ATI TEAS: The actual exam**

#### Mathematics Section 36 Questions 54 Minutes

#### Number and algebra - 23 questions

- -Convert among non-negative fractions, decimales, and percentages
- -Perform arithmetic operations with rational numbers -Compare and order rational numbers
- -Solve equations in one variable
- -Solve real-world one- or multi-step problems with rational numbers
- -Solve real-world problems involving percentages
- Apply estimation strategies and rounding rules to real-world problems
- -Solve real-world problems involving proportions
- Solve real-world problems involving ratios and rates of change
- -Translate phrases and sentences into expressions, equations, and inequalities

#### Measurement and Data - 9 questions

- Interpret relevant information from tables, charts, and graphs
- -Evaluate the information in tables, charts, and graphs using statistics
- -Explain the relationship between two variables
- -Calculate geometric quantities
- -Convert within and between standard and metric systems



- 1. How do you write the fraction  $40 \frac{31}{10,000}$  as a decimal? 2. How do you write the decimal number 0.016 as a fraction?
- 3. What is the decimal value of 3.5%?

4. Find the quotient:  $\frac{7}{36} \div \frac{28}{45}$ . 5. What is the correct answer to this expression: 4 + (18 ÷ 3) × 2 = ?



# 6. Find the sum: $\frac{3}{8} + \frac{3}{4}$ .

- 7. Which of the numbers in the following series has the greatest value: -7, 0, -2.1, -0.8?
- 8. Solve the following equation 5x = 65 for x.
- 9. Solve the equation y 45 = 0 for y.

10. Solve the equation 
$$\frac{3}{4}n + 7 = 34$$
 for  $n$ .



11. Greg had \$105 in his savings account. After depositing two identical weekly paychecks, he had \$563 in the account. How much money does Greg earn each week? 12. Julio's rock garden measures 8 feet by 4 feet. Julio wants to create a continuous border around the rock garden using square concrete paving blocks that measure 6 inches on a side. How many paving blocks should Julio purchase?



13. Last year, 128 babies were born on the fifth floor of the hospital. This year, 160 babies were born on the fifth floor. What was the percentage increase in babies born of the fifth floor?

14. At the electronics store sale, Jasmine purchased a computer tablet that was marked down 23% to \$346.50. What was the original price of the tablet?



15. What is 2,346 rounded to the nearest 100?

16. What is 19.796 rounded to the nearest hundredth?

17. A 4324-lb truck needs to carry a load across a bridge with a legal limit of 6,400 lbs. What would be the largest load that the truck could legally carry on the bridge?

18. A nurse adds 4 g of salt to 20 ml of water to make a saline solution. How much salt should be added to 75 ml of water to make a solution of the same strength?

- 19. Tamara reads 40 pages of a novel in 52 minutes. How long will it take her to read a novel of 200 pages?
- 20. Renay rode her bike 3.2 miles in 12 minutes. At this rate, how long will it take her to ride the entire 42-mile trip from her house to Santa Fe?



21. The coordinates for point A are (4,4). The coordinates for point B are (1,2). Find the slope.

22. Sergio had twelve fewer credits than five times what Joanna had. What expression describes the number of Sergio's credits?

23. Ninety-two added to five times Herbert's weekly salary is less than Mrs. Morton's weekly salary of \$1,119. What mathematical expression describes this situation?



#### Sound Shore Hospital: Nurse Time Per Shift (hrs)





1. On the graph from the previous PowerPoint, what percentage of the time do nurses spend on prep work and paperwork?

2. One nursing textbook states that nurses in a good-quality facility will spend 60% of their time in patient care, but in the best facilities, nurses devoted 70% of their time to patient care. What can you conclude about Sound Shore Hospital from the graph on the previous PowerPoint?



 The table below shows Hector's scores from seven different judges in a gymnastics competition. Use this table to answer the next two questions.

Judge	1	2	3	4	5	6	7
Score	8.6	7.8	8.6	8.2	9.5	8.6	9.6



- 3. What was greater, Hector's median score or mode score? By how much?
- 4. Which score change would push the mean value of Hector's scores to 9.0 or above?

5. Which of the following pairs of variables has a negative covariance?

(A) x = number of snowballs in one winter, y = number of snow shovels sold

(B) x = number of hours Reza works in a month, y = amount of Reza's paycheck

(C) x = time spent running on a treadmill, y = number of calories burned

(D) = number of customers renting a room in a motel, y = number of rooms available







6. What is the total perimeter measurement of the free throw lane?

7. What is the total area of the free throw lane in the diagram on the previous PowerPoint?







9. A nurse poured 3.2 quarts of liquid into a container. How many fluid ounces were in the container?

10. 45.6 cm equals how many hectometers?

11. Each day, a 125-lb patient is supposed to receive 0.8 mg of medication per kilogram of body weight. What dosage should the patient receive?



### Number and Algebra Answers

1.	40.0031	7.0	14. \$450	21. $\frac{2}{2}$
2.	16	8.13	15. 2,300	3 22. 5x-12
С		9.45	16. 19.80	23 5s + 92 < 1119
э.	5	10.36	17. 2,050 lbs	
4.	$\frac{5}{16}$	11. \$229	18. 15 g	
5.	16	12.48	19. 4 hours, 2	0 minutes
6.	<u>9</u> 8	13. 25%	20. 157.5 min	



### Measurement and Data Answers

- 1. 17.5%
- 2. The hospital is rated good but not the best.
- 3. The mode and median were both the same, 8.6.
- 4. Judge 2 increasing his score by 2.1.
- 5. (D)
- 6. 68.84 ft

- 7. 284.52 ft<sup>2</sup>
- 8. 588 cm<sup>2</sup>
- 9. 102.4 fl oz
- 10. 0.00456 hm
- 11. 45.36 mg



## **TEAS Math: What to Expect**

- Decimal Conversion to Fraction
- Fraction to Decimal
- Order of Operations
- One Variable Equations
- Statistical Evaluation of Data
- Geometry
- Story Problems
- English to Metric Conversions
- Standard and Metric Systems Conversions
- Metric Prefix Equivalents
- Metric Abbreviations & Prefixes
- Length, weight and fluid abbreviations



#### Place Value

#### **Fractions Decimals Percents**



#### **CONVERT FRACTIONS PERCENTS AND DECIMALS**

FRACTION	PERCENT	DECIMAL
1/12	8.33%	0.083
1/10	10%	0.1
1/8	12.5%	0.125
1/6	16.6%	0.166
1/5	20%	0.2
1/4	25%	0.25
1/3	33.3%	0.33
3/8	37.5%	0.375
2/5	40%	0.4
1/2	<b>50%</b>	0.5
3/5	60%	0.6
5/8	62.5%	0.625
2/3	66.67%	0.667
3/4	75%	0.75
4/5	80%	0.8
7/8	87.5%	0.875
1	100%	1.0



#### Standard and Metric Systems

#### **U.S Customary Units**

Length	Weight	Capacity	Time
12in - 1#	16oz = 1lb	16 fl oz = 1gal	60 sec = 1 min
1211 - 11	00001 4 1		60 min = 1hr
3ft = 1yrd	2000lb = 1 ton	2 pt = 1qt	24 hr = 1 day
		8pt = 1gal	7 days = 1 wk
5,280 ft = 1mi			52 wk = 1 yr
1 760vrd = 1mi		4 qt = 1gal	12 mo = 1 yr
.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			365 days = 1 y

#### Liquid Measurements

**US Standard System** 

1 cup	=	8 fluid ounces (fl oz)
1 pint (pt)	=	2 cups
1 quart (qt)	=	2 pints
1 gallon (gal)	=	4 quarts



#### **English to Metric Conversions**

Metric Units	Customary Units		
1 centimeter	0.394 inch		
1 meter	3.281 feet or 1.093 yards		
1 kilometer	0.621 mile		
1 gram	0.035 ounce		
1 kilogram	2.205 pounds		
1 milliliter	0.034 fluid ounce		
1 liter	1.057 quart or 0.264 gallon		

**Celsius To Fahrenheit** 

Fahrenheit To Celsius

 $F = \frac{9}{5}C + 32$ 

 $C = \frac{5}{9}(F - 32)$ 

Fahrenheit And Celsius Conversion

<b>Customary Units</b>	Metric Units	
1 inch	2.54 centimeters	
1 foot	30.48 centimeters or 0.3048 meter	
1 yard	0.914 meter	
1 mile	1.609 kilometers	
1 ounce	28.350 grams	
1 pound	454 grams or 0.454 kilogram	
1 fluid ounce	29.574 milliliters	
1 quart	0.946 liter	
1 gallon	3.785 liters	



#### Metric/Standard Conversions

#### **Table of Approximate Conversions**

Length: Metric to U.S	<b>Capacity:</b> <b>Metric to U.S.</b>	Weight (mass): Metric to U.S.		
1 m ≈ 1.09 yd	1 L ≈ 1.06 qt	$1 \text{ kg} \approx 2.20 \text{ lb}$		
$1 \text{ m} \approx 3.28 \text{ ft}$	$1 L \approx 0.26 \text{ gal}$	$1 \text{ g} \approx 0.04 \text{ oz}$	Length	Volume
1 km ≈ 0.62 mi	3.79 L ≈ 1 gal	$0.45 \text{ kg} \approx 1 \text{ lb}$	1 m = 39.37 in	1 liter = 33.81 fl.oz
2.54 cm $\approx$ 1 in.	0.95 L ≈ 1 qt	28.35 g ≈ 1 oz		
$0.30 \text{ m} \approx 1 \text{ ft}$	$29.57 \text{ ml} \approx 1 \text{ fl oz}$			
1.61 km ≈ 1 mi				



#### Metric System of Measurement

#### **MASS/WEIGHT:**

K: 1 Kilogram	=	1000 Grams	kg
H: 1 Hectogram	=	100 Grams	hg
D: 1 Decagram	=	10 Grams	dag
U: 1 Gram			g
D: 1 Decigram	=	0.1 Gram	dg
C: 1 Centigram	=	0.01 Gram	cg
M: 1 Milligram	=	0.001 Gram	mg
VOLUME:		4 0 0 0 T 1	
VOLUME:		10007.1	1.1
K: I Kiloliter	=	1000 Liters	KI
H: 1 Hectoliter	=	100 Liters	hl
D: 1 Decaliter	=	10 Liters	dal
U: 1 Liter			1
D: 1 Deciliter	=	0.1 Liter	dl
C: 1 Centiliter	=	0.01 Liter	cl
M: 1 Milliliter	=	0.001 Liter	ml

Here is another chart to help you understand the metric categories.

	SIZE COMPARED	
<b>PREFIX</b>	TO BASE UNIT	<b>ABBREVIATION</b>
Kilo	1000 x Larger	k
Hecto	100 x Larger	h
Deca	10 x Larger	da
Unit	1	meter, gram, liter
Deci	.1 x Smaller	d
Centi	.01 x Smaller	с
Milli	.001x Smaller	m

Still a little confused? Okay, let's break this down between length (meter), mass/weight (gram) and volume (liter) as follows:

LENGTH:	Abbreviation Used:		
K: 1 Kilometer	=	1000 Meters	km
H: 1 Hectometer	=	100 Meters	hm
D: 1 Decameter	=	10 Meters	dam
U: 1 Meter			m
D: 1 Decimeter	=	0.1 Meter	dm
C: 1 Centimeter	=	0.01 Meter	cm
M: 1 Millimeter	=	0.001 Meter	mm





#### **Geometry Formulas**

Please go to the following website for more geometric formulas.

https://www.effortlessmath.com/math-topics/ati-teas-6math-formulas/



## **Additional Resources**

Please visit the following websites for more TEAS test prep in mathematics and other subject areas.

https://www.youtube.com/watch?v=PwTOIF9ez5I

https://library.ivytech.edu/testprep/TEAS

https://www.test-guide.com/teas-study-guide.html

https://www.bcraftmath.com/atiteas.html



#### Additional Resources



#### A HIGHER SCORE IN LESS TIME

- A complete ATI TEAS course in a concise, time-saving format
- Targeted review covers only material that will actually be tested
- · Strategies for answering every type of question
- · Free online practice exam pinpoints your strengths and weaknesses

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Available on Amazon, Barnes & Noble, Thriftbooks.com and other websites.



MATH

Number & Algebra

Time: 54 minutes

ENGLISH &

Knowledge of Language

Vocabulary Acquisition

Time: 28 minutes

Measurement & Data

Total Questions: 32 + 4 pretest items

LANGUAGE USAGE

Total Questions: 24 + 4 pretest items

**Conventions of Standard English** 

### **ATI TEAS** Overview, facts and study tips

# How TO Pass Your ATI TEAS VI

The ATI TEAS VI is an admissions test used by health science and nursing schools. Use these tips to ace your TEAS on the first try!

#### **CONTENT OVERVIEW**

READING Key Ideas & Details Craft & Structure Integration of Knowledge & Ideas Total Questions: 47 + 6 pretest items Time: 64 minutes

#### SCIENCE

Human anatomy & Physiology Life & Physical Sciences Scientific Reasoning Total Questions: 47 + 6 pretest items Time: 63 minutes

#### **FACTS**



over next 10 years

₫\$70K Median pay per year for Registered Nurses

**i**€69% Total questions on Total time (minutes) the TEAS VI

to take the TEAS VI

Acceptance Rate of **BSN Nursing Programs** 

#### EXPECT < **BRING** DON'T BRING · Photo ID -Additional clothes -Calculators - are license, passport including jackets, hats, provided or greencard and sunglasses Proctors-will monitor testing #2 Pencils – at Personal items least 2 including purses and Breaks - 10 minute ATI Login Info backpacks break during math Electronics - no phones, Issues - raise your calculators, digital or hand if you need to smart watches leave your seat, or for Food/Drink-unless technical issues medically necessary

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areas this ang/heremotive/harking education statistics/indexteenes to numbra programs athenting conversions many

For more info, including free practice tests, go to www.Test-Guide.com/TEAS/



#### STUDY TIPS TIP #3 <

English: 1 min

The TEAS VI is a timed

exam. To finish the exam.

Best way to prepare is to study smart:

Understand what's on

FOCUS

- each of the 4 tests · Focus on the material
- you're not good at Develop a flexible study schedule
- · Study when you are most alert

PRACTICE Practice makes perfect. Take as many practice exams as possible:

- · Fully understand all the questions you get wrong
- Tackle one section of the exam at a time
- · Take exams with selfimposed time limits

you need to keep pace. Answer each question in

less than this amount of time: Reading: 1 min 10 sec Math: 1 min 30 sec Science: 1 min 10 sec



Thank You!

## **HOPE YOU DO WELL. CHEERS!**

