Chapter 1 : Diman Regional Voc-Tech / Serving Fall River, Somerset, Swansea, and Westport

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These courses will enable them to be successful whether they enter a trade or continue on to a two or four year college. The department uses a variety of instructional methods to meet the needs of all learners and to develop an understanding and appreciation of mathematics. These skills are essential in developing analytical, abstract, and concrete thinking proficiency. Students are offered basic and advanced math courses for vocational and post-secondary school preparation. The freshman and sophomore math curriculum includes Algebra and Geometry courses that are designed to implement the Massachusetts Mathematics Curriculum Framework and enhance student performance on the MCAS test. The math curriculum for juniors and seniors has been developed to provide students with two routes to success. For those who have passed the MCAS math test as sophomores, advanced math courses are provided to prepare students for post-secondary education. For those needing to retake the MCAS test, Integrated Math courses have been developed to help students review the math standards necessary for success on the exam. Students will understand numbers, ways of representing numbers, relationships among numbers, and number systems. Students will understand meanings of operations and how they relate to one another. Students will compute fluently and make reasonable estimates. Patterns, Relations and Algebra Strand: Students will understand patterns, relations, and functions. Students will represent and analyze mathematical situations and structures using algebraic symbols. Students will use mathematical models to represent and understand quantitative relationships. Students will analyze changes in various contexts. Students will analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships. Students will specify locations and describe spatial relationships using coordinate geometry and other representational systems Students will apply transformations and use symmetry to analyze mathematics situations. Students will use visualization, spatial reasoning, and geometric modeling to solve problems. Students will maintain portfolios that contain a year-to-year record of their best writing, reading, and other achievements. These portfolios are student-directed and include an essay stating the students educational and career goals. All work in portfolios will be typed. Students will understand measurable attributes of objects and the units, systems, and processes of measurement. Students will apply appropriate techniques, tools, and formulas to determine measurements. Data Analysis, Statistics, and Probability Strand: Students will formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them. Students will select and use appropriate statistical methods to analyze data. Students will develop and evaluate inferences and predictions that are based on data. Students will understand and apply basic concepts of probability. Algebra is a traditional course designed to prepare students who demonstrate strong math skills on the skills assessment test for technical employment and post-secondary education. All Algebra I classes are college prep. This course is offered to students who demonstrate advanced mathematical skills on the mathematics skills assessment test. It is designed to cover algebraic topics more in depth and at a more rapid pace. This course is designed for students who are planning to continue onto a four year college and who have passed Foundations of Algebra I. It progresses at a slower pace and emphasizes the same topics as Geometry CP. It will fill the requirements of a two year college. This course is designed to develop a deductive and analytical approach to geometric concepts. Geometry will help prepare students for both college and the work force by providing them with many different applications in various areas. Students must pass Algebra I to take this course. A deep foundation of geometric principles is presented, which allows students to pursue more advanced courses in mathematics. Honors Geometry is recommended for those students who successfully completed Honors Algebra I during their freshman year or have the permission of the department head. This course will cover topics of Geometry in a faster paced and in-depth manner. Geometry is a prerequisite for Algebra II. This course is a requirement for all students whether they are planning to enter the work force or continue on to a two or four year college. Foundations of Algebra II: This course is recommended for students

who have passed Foundations of Algebra I and Foundations of Geometry. This course will fulfill the graduation requirement of Algebra II. It will fulfill the requirements of a 2 year college, but not the requirements of a four year college. All students are required to take Algebra II. The following courses are senior electives. High School Finance I: High School Finance is designed for students who are planning to start their own business or work in their technical areas. This course concentrates on practical math topics such as checking and savings account, loan applications and percentage rates, and insurance and mortgage information, and credit cards. This course is offered to those students who have passed all college prep math courses and successfully passed Algebra II with a grade of 84 or better. It is recommended for those who are interested in attending college plan to enter fields such as: This course will introduce the students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. This course is recommended for students who plan to major in college in the areas of psychology, sociology, health science and business. This course is offered to students who have taken all college prep math courses and demonstrated that they have superior mathematical skills and are preparing for college. Permission of the departments head is mandatory. This course is offered to students who have successfully completed Pre-Calculus and received permission of the department head. A strong mathematical background is required. Topics for discussion include functions, the derivative, techniques of differentiation; curve sketching, exponential and logarithmic functions, the integral and techniques of integration.

Chapter 2 : Career Major | Greater New Bedford Regional Vocational Technical High School

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What are vocational and trade schools? Trade schools, vocational schools, and technical schools are places that can help you train for jobs that require a particular educational experience or where you can learn specific technical skills. Though the terms are often interchangeable, keep these main differences in mind while you plan your vocational training path: Pilot, Paralegal, Medical Assistant, Cosmetologist Trade Trade jobs are jobs in the skilled trades, typically labor-based and requiring specific training Trade schools often focus on careers that involve physically demanding manual work Example trade careers: Electrician, Carpenter, Tile Setter, Welder Technical Technical schools are where you can go to learn a trade career, or the specific skill needed for one. May involve apprenticeship or other training Study for a technical career typically does not involve liberal arts or non-essential academic requirements Technical schools can be good for: Whether fresh out of high school or looking for a career change, trade and technical careers and vocational jobs are sometimes better options than degree programs offered at traditional colleges if: You are interested in a career with less of an academic focus You enjoy hands-on work You want to spend a shorter amount of time in school and save money You prefer to focus on courses directly related to your target occupation Your goal is a more direct entry into the workforce You want both on-campus and online program options You want to start earning an income sooner rather than later You want the increased job opportunities that can come with education beyond a high school diploma Many jobs in the skilled trades are expected to have strong job growth prospects in the coming years, as baby boomers retire without enough younger people training for and filling these positions. Opportunities are plentiful for those with a two-year degree or less. Regardless if you are pursuing a technology-based or liberal-arts vocational career, here are a few things to keep in mind when considering an online program versus an on-campus school: Online vocational schools Campus-based trade schools Can offer the flexibility many students need â€" especially those who anticipate working while enrolled Vocational programs with partially or fully online learning options may include fields like computer programming, medical billing and coding, or graphic design Learn more about the benefits of online vocational education for trade careers and technician jobs Can offer students more of the hands-on training needed for certain vocational jobs Some may find better networking benefits or more elements of a traditional college experience Vocational programs that might benefit from an on-campus experience include automotive trades or electrician or HVAC technician training How much does trade school cost? Location can make a big difference. Areas with a higher cost of living or a large urban population tend to have more expensive programs, and private colleges may have higher tuition compared to community colleges. How to choose the right vocational program Find an accredited school or program offering. If you are planning on working while in school or training, consider the length of your program and how it may impact your availability for your current job. Be sure to thoroughly research the expected costs for tuition and fees for your vocational program â€" and find out what you can about costs that might be separate from tuition and fees, such as for equipment, supplies, or exams. Explore available financial aid options. Remember that there are often certain requirements to be eligible for grants, scholarships, and other types of financial aid, like work-study programs. Talk to a career guidance counselor or adviser to establish your career-focused plan. Ask about potential career paths related to your hands-on experience, financial goals, or current education. See if you can apply any of your current work experience to required hours for a training program. Find Colleges by State Find accredited, career-focused trade or vocational schools in each state, plus find more localized options.

Books by James L. Southam, Contemporary Business Mathematics, Brief, Vocational Mathematics for Business (Mb - Business/Vocational Mathematics Series), Txbk, Vocational Math F/Business, Contemporary Business Mathematics for Colleges, Vocational Mathematics for Business, Vocational Mathematics for Business, Business Mathematics for College, Contemporary Business Math.

Work Environment Mathematicians held about 3, jobs in Most mathematicians work for the federal government or for private scientific and engineering research and development companies. The industries that employed the most mathematicians in were as follows: Federal government Scientific research and development services 20 Educational services; state, local, and private 18 Management of companies and enterprises 7 Manufacturing 3 Mathematicians typically work in comfortable offices. They also may work on teams with engineers, scientists, and other professionals. Work Schedules Most mathematicians work full time. Deadlines and last-minute requests for data or analysis may require overtime. In addition, mathematicians may have to travel to attend seminars and conferences. Courses usually include calculus, differential equations, and linear and abstract algebra. Many colleges and universities advise or require mathematics students to take courses in a related field, such as computer science, engineering, physics, or statistics. Candidates who have a double major in mathematics and a related discipline are particularly desirable to many employers. Many students who get a doctoral degree work as professors of mathematics in a college or university, rather than work in government or private industry. Students who are interested in becoming mathematicians should take as many math courses as possible in high school. Personality and Interests Mathematicians typically have an interest in the Thinking, Creating Organizing interest areas, according to the Holland Code framework. The Thinking interest area indicates a focus on researching, investigating, and increasing the understanding of natural laws. The Creating interest area indicates a focus on being original and imaginative, and working with artistic media. The Organizing interest area indicates a focus on working with information and processes to keep things arranged in orderly systems. If you are not sure whether you have a Thinking or Creating or Organizing interest which might fit with a career as a mathematician, you can take a career test to measure your interests. Mathematicians should also possess the following specific qualities: Mathematicians use mathematical techniques and models to analyze large amounts of data. They must be precise and accurate in their analysis. Mathematicians must interact with and propose solutions to people who may not have extensive knowledge of mathematics. Mathematicians use statistics, calculus, and linear algebra to develop their models and analyses. Mathematicians must devise new solutions to problems encountered by scientists or engineers. The median wage is the wage at which half the workers in an occupation earned more than that amount and half earned less. In May , the median annual wages for mathematicians in the top five industries in which these mathematicians worked were as follows:

Chapter 4 : List of Careers Involving Math | www.nxgvision.com

James L. Southam is the author of Vocational Mathematics for Business (avg rating, 0 ratings, 0 reviews, published), Txbk, Vocational Math F/Bus.

Mathematics teaches problem-solving, an invaluable skill in the workplace. Careers involving math are found in almost every field, including medical, scientific and research communities. Each of these careers involve using some level of math on a regular basis. Statisticians and Mathematicians Statisticians use math on a daily basis. They collect data from surveys and studies and analyze the data. Analysts also work with numerical data in various fields. For example, operations analysts examine the productivity and effectiveness of a company. They help develop strategy and ways to make operations more cost-effective. Mathematicians work in a variety of fields. For example geophysical mathematicians use math to analyze seismic data in the Earth and calculate the amount of oil reserves in a specific location. Engineers and Architects Correct use of math is a critical skill for engineers and architects to ensure that the buildings and structures they build are safe. Structures and bridges must be able to bear large amounts of weight. In addition, they need to calculate for things such as flooding and earthquakes to make buildings sturdy as possible. Engineers and architects use data when planning, designing and problem-solving. Mathematics is taught at every level of education â€" from elementary school to post-graduate school. Teachers must have a deep understanding of math to be able to teach the principles and answer student questions. Healthcare Professionals Most careers in the medical field involve math. Doctors and pharmacists use math to correctly calculate and prescribe medication dosages. Medical staff also use mathematics to analyze data from medical tests such as blood counts. Nurses need math skills to calculate the flow rate and amount of medication to put in an IV. Public heath educators conduct studies and use statistics to educate the public about community health issues, such as the correlation between smoking and lung disease. Cryptographers Cryptographers use math to encode and protect data. Their work protects confidential information such as financial and medical data and government messages. They may also work to decode intercepted messages or to analyze hidden data if a crime is suspected. Knowlege of mathematical algorithms is critical to encoding and designing effective encryption. Hours are spent solving probems with complex formulas and computer programs. Programmers and Designers Working with computers almost always involves math. Programmers must understand algorithms and analyze how to make their programs work. Each program must take in data and return the correct analysis in order for programs to be useful and effective. Math is also used in computer aided design and animation and special effects. Rapidly advancing fields such as artificial intelligence and robotics rely heavily on math and logic. Knowledge of calculus, linear algebra, probability and differential equations is applied to the design of computational models. Scientists Scientists in almost every field use mathematics. For example, forensic scientists use math to analyze evidence gathered at a crime scene, such as the size of a weapon, the amount of force used or the speed of a vehicle before impact. Chemists use math to make sure that chemicals are mixed in correct proportions and to help predict how chemicals will interact. Scientists continually search for new knowledge by studying theories, testing their hypothesis, conducting reseach experiments and looking for statistically signifcant correlations between idependent and dependent variables. References 2 Maths Insider: She writes articles for business promotion and informational articles on various websites. Malone has a Bachelor of Science in technical management with an emphasis in biology from DeVry University.

Chapter 5 : FINAL EXAM CHS 7&8: TEACH/SCHOOL/SOCIETY Flash Cards: Koofers

The math curriculum at Greater New Bedford Regional Vocational Technical High School develops mathematical and thinking skills. These skills are essential in developing analytical, abstract, and concrete thinking proficiency.

Chapter 6 : Vocational Education Questions for Tests and Worksheets - Page 3

Vocational Mathematics by James L Southam starting at $ Vocational Mathematics has 1 available editions to buy at Alibris Txbk, Vocational Math F/Business.

Chapter 7 : Math | Greater New Bedford Regional Vocational Technical High School

The UK qualitative review considered current challenges and best practices in post vocational maths education across a range of providers, employers and maths specialists. Qualitative interviews (a mixture of face to face and.

Chapter 8 : James L. Southam | Open Library

Vocational Education questions for your custom printable tests and worksheets. In a hurry? Browse our pre-made printable worksheets library with a variety of activities and quizzes for all K levels.

Chapter 9 : Free Math Printable Worksheets | www.nxgvision.com

Vocational courses and classes are available in many different career fields, such as health care, computer technology, office management and skilled trades. These courses are offered by career.