Precalculus Daily Lessons 6.3-4 Vectors

February 2020

Thursday, February 6, 2020

Objective: I can understand vectors as a directed line segment (magnitude and direction), performing basic operations, changing between forms, interpreting meaning, and applying in real-world physical situations to solve problems.

* Take a study hall. Questions about electives, master schedule, math.
* Notes – Fill in the blanks on vector notes 6.3 – changing forms, applying in context, interpreting forms, adding, multiplying by a scalar.
* Try these.
* HW #9 – work in class – p 425-7: 1-8, 15, 18, 19, 31, 34, 37, 51, 52, 64, 67, 70, 72, 75, 79, 93.
* Pass out review worksheet 6.3 – practice for quiz. Not due til Wed, but useful for understanding.
* View test grades.

Quiz 6.3 – Wed, Feb 12

Monday, February 10, 2020

Objective: I can apply the forms, magnitude, and direction of vectors to solve problems in application, performing basic operations to get resultant vectors.

* Warm-up: check your homework from the attachment on the daily blog.
* Take a grade on HW #9 – 4 pts
* Finish first review. Check page 1 on screen.
* Pass out second review of 6.3 (These reviews will be graded for 4 pts as HW #10).
* After lunch – questioning and explanations of HW #9. Particular notice to questions about angles.
* Work on reviews and check review #1.
* Notes and Practice – 6.4 – Dot products basics
* HW #11a (finish worksheets and this by Wednesday). P 435: #2, 4, 13, 15, 16, 23.

Quiz next block over 6.3. Quiz Friday over 6.4. Test next Wednesday over 6.3-4.

Wednesday, February 12, 2020

Objective: I can demonstrate mastery over 6.3 basics of vector forms, magnitude and direction. I can find the dot product of two vectors and learn some basics of properties and uses of dot products.

* Go over review worksheets 6.3 (HW #10).
* Questions. Suggestions for mistakes you might make on the quiz.
* Any questions over HW #9? No notes on quiz.
* Notes and Practice – 6.4 How can we apply dot products? Orthogonal? Angle between two vectors, product from angle and magnitude, forces on inclined plane, etc.
* HW #11b: pp 435-7: 31, 47, 53, 55, 74, 77, 81.
* HW #11c: Review Worksheet 6.4 (both due next time)
* Quiz 6.3 – 24 pts

Quiz next time, Friday, Feb 14, 6.4 Dot Products – 20 pts

Friday, Feb 14, 2020

Objective: I can demonstrate mastery over dot products of vectors.

* Go over HW #11 b carefully. How to solve for the dot product. How to get the perpendicular force using the Pythagorean Theorem. When to set calculator on radians.
* Go over review worksheet (#11c) carefully. Be careful with parentheses on calculator when denominator is a product.
* Pass out HW #12 – Review 6.3-4
* After lunch: Quiz 6.4
* Work on review worksheet, Due next Wednesday.

Quest (50 pts) next Wednesday over 6.3-4 after we go over the review.

Wednesday, Feb 18, 2020

Objective: I can demonstrate mastery over vectors, dot products, and applications.

* Go over Review 6.3-4 carefully. Questions.
* Take a grade over review – 5 pts
* ACT issues coming up!
* Test 6.3-4 – 50 pts
* No homework.

Friday, February 20, 2020

Objective: I can determine if two functions are inverses, when a function has an inverse; I can describe inverse functions graphically, algebraically and with words domain, range, input, output. I can describe what a one-to-one function is.

* Warm-up: composition of functions, leading to f(g(x)) = g(f(x)) = x, definition of inverses
* Graphing activity. Graph these 5 functions (how to limit domain). Sketch and give domain and range.
* Notes and practice: Finding inverse graphically and algebraically (Use #1 from graphing activity). Show how #5 is its own inverse.
* Go thru examples in textbook 1.9 quickly. Use as resource on homework.  
  HW #1 – pp 90-92: 1-6, 10, 15, 18, 21, 29, 30, 37-40, 55, 58, 61, 79, 83, 89, 91, 92, 93

Tuesday, Feb 25, 2020

Objective: I can practice using inverse definition to solve problems.

* Go over HW #1. Take a grade next time. Fix it.
* Pass out worksheet 1.9 (HW #2) – work in class.
* Return test 6.3-4 to view – 50 pts

Quiz next time – 1.9 Inverses