Mathematics Class Slides

Bronx Early College Academy

Chris Huson

22 October - 2 November 2018

3b.1 Drui - Vector arithmetic, Friday Nov 16

3b.2 Drui - Vector arithmetic, Monday Nov 19

3b.4 Drui - Vector equations of lines, Wednesday Nov 21

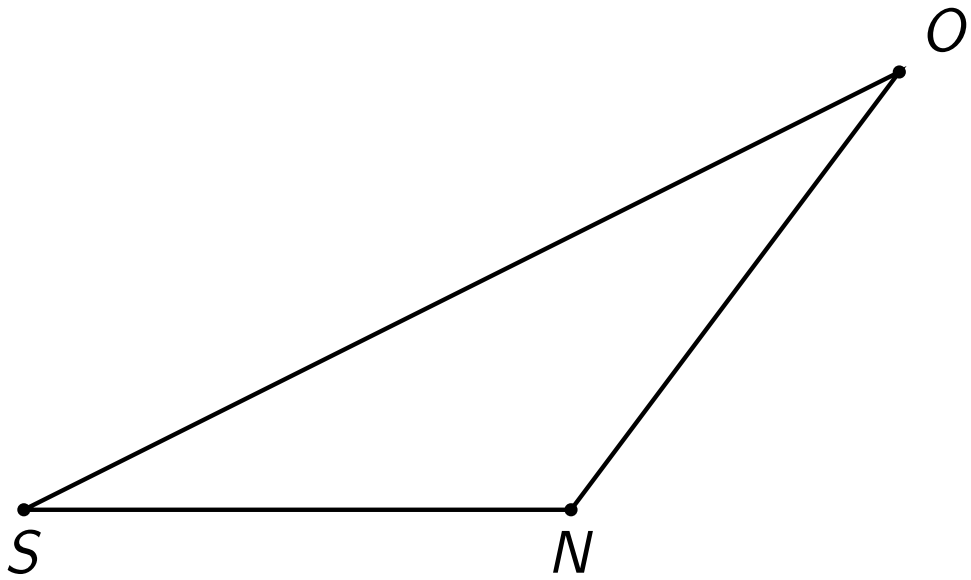
3b.5 Drui - Vector equations of lines, intersections, Monday Nov 26

3b.7 Drui - Vector equations of lines, applications, Wednesday Nov 28

GQ: How do we find the angle between vectors?

CCSS: HSG.SRT.D11 Apply the law of cosines 3b.1 Friday Nov 16

Do Now: Given $\triangle SNO$ with $S(2,1), N(7,1), O(10,5)$.



1. Write down the law of cosines
2. Find the lengths SN and SO
3. Given $m\angle S = 26.6°$, find NO

Lesson: Law of cosines, the scalar product

Homework exercise 12I pp. 428-9

GQ: How do we find the angle between vectors?

CCSS: HSG.SRT.D11 Apply the law of cosines 3b.2 Monday Nov 19

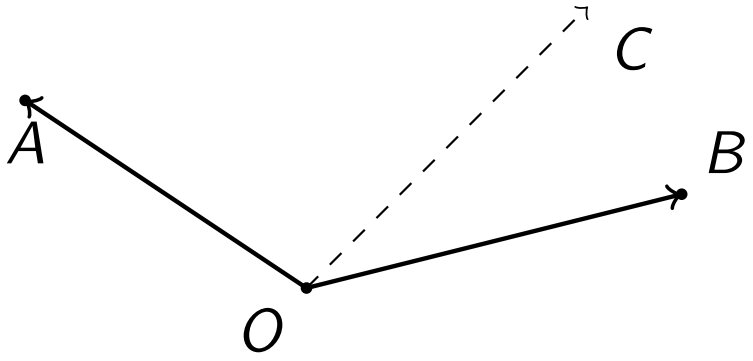
Do Now: Exam Style Question #5 p 439.

Lesson: Practice with the law of cosines, the scalar product
Homework: Calculus review problem set handout

GQ: How do we find the angle between vectors?

CCSS: HSG.SRT.D11 Apply the law of cosines 3b.4 Wednesday Nov 21

Do Now: Given position vectors $\overrightarrow{OA}, \overrightarrow{OB}, \overrightarrow{OC}$ with $A(-3, 2), B(4, 1), C(3, k)$.



1. Find $m\angle AOB$
2. Find k such that $\overrightarrow{OA} \perp \overrightarrow{OC}$

Review Exercise 12I pp. 428-9

Lesson: Vector equations of lines p. 430-1

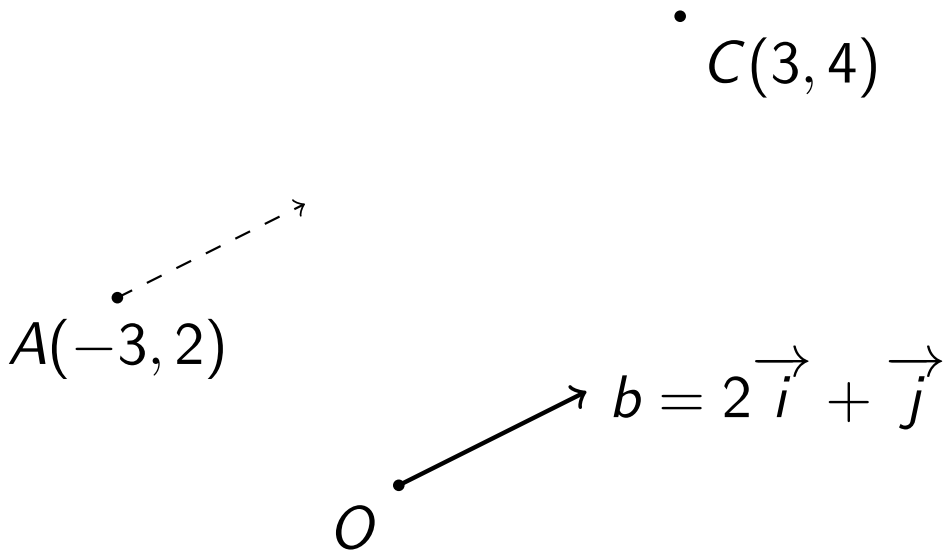
Homework: Calculus review problem set handout

GQ: How do we use vector line equations?

CCSS: HSG.SRT.D11 Apply the law of cosines 3b.5 Monday Nov 26

Do Now: Given $A(-3, 2)$ and direction vector $\overrightarrow{b} = 2\overrightarrow{i} + \overrightarrow{j}$

1. Find the equation of the line through A parallel to $\overrightarrow{b}$
2. Is the point $C(3, 4)$ on the specified line? Justify your answer.



Review vector equations of lines, Exercise 12J pp. 432-4
Lesson: Finding the intersection of two lines p. 434-5
Homework: Exercise 12J pp. 432-4
Parent-teacher conferences Thursday & Friday

GQ: How do we use vector line equations?

CCSS: HSG.SRT.D11 Apply the law of cosines 3b.7 Wednesday Nov 28

Do Now: Write directions to go from Room 414 to Yankee Stadium. Assume that streets in the Bronx run north-south and east-west. Estimate distances.

Spicy: include a third dimension (elevation).

Review intersections of two lines p. 434-5
Lesson: Applications p. 437
Homework: Exercise 12K pp. 435-6

Parent-teacher conferences tomorrow & Friday