Web**Assign**
Hw 1 (12.1, 12.2): 3D Coordinate Systems, Vectors (Homework)

Yinglai Wang
MA 162 Spring 2012, section 321, Spring 2012
Instructor: Jonathan Montano

Current Score : 20 / 20   **Due :** Thursday, January 12 2012 11:55 PM EST

The due date for this assignment is past. Your work can be viewed below, but no changes can be made.

Important! Before you view the answer key, decide whether or not you plan to request an extension. Your Instructor may *not* grant you an extension if you have viewed the answer key. Automatic extensions are not granted if you have viewed the answer key.

View Key

---

1. 3.33/3.33 points | Previous Answers   SCalcET7 12.1.006.

(a) What does the equation $x = 5$ represent in $\mathbb{R}^2$?

- ○ a circle
- ○ a point
- ○ a plane
- ● a line ✔

What does it represent in $\mathbb{R}^3$?

- ○ a point
- ○ a line
- ● a plane ✔
- ○ a circle

(b) What does the equation $y = 4$ represent in $\mathbb{R}^3$?

- ● a plane ✔
- ○ a line
- ○ a circle
- ○ a point

What does $z = 6$ represent?

- ○ a point
- ◉ a plane
- ○ a line
- ○ a circle

✔

What does the pair of equations $y = 4$, $z = 6$ represent? In other words, describe the set of points (x, y, z) such that $y = 4$ and $z = 6$.

- ○ a circle
- ○ a point
- ○ a plane
- ◉ a line

✔

Need Help? | Read It | | Chat About It |

----

2. 3.33/3.33 points | Previous Answers   SCalcET7 12.1.007.

Find the lengths of the sides of the triangle *PQR*.

$P(6, -1, 0)$, $Q(8, 0, 2)$, $R(9, -2, 0)$

$|PQ|$ =

✔

$|QR|$ =

✔

$|RP|$ =

✔

Is it a right triangle?

- ○ Yes
- ◉ No

✔

Is it an isosceles triangle?

Yes

No

✔

Need Help?   [Read It]   [Watch It]   [Chat About It]

---

3. 3.33/3.33 points | Previous Answers   SCalcET7 12.1.011.

Find an equation of the sphere with center $(-2, 4, 7)$ and radius 6.

✔

What is the intersection of this sphere with the *yz*-plane?

✔ , $x = 0$

Need Help?   [Read It]   [Chat About It]

---

4. 3.33/3.33 points | Previous Answers   SCalcET7 12.1.014.

Find an equation of the sphere that passes through the origin and whose center is $(4, 1, 3)$.

✔

Need Help?   [Read It]   [Chat About It]

---

5. 3.33/3.33 points | Previous Answers   SCalcET7 12.1.016.

Write the equation of the sphere in standard form.

$$x^2 + y^2 + z^2 + 12x - 6y + 6z + 45 = 0$$

✔

Find its center and radius.

center $(x, y, z) = \left(\qquad\qquad ✔ \right)$
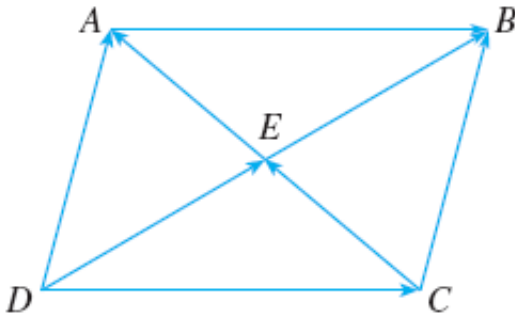
radius

----

6. 3.35/3.35 points | Previous Answers   SCalcET7 12.2.003.

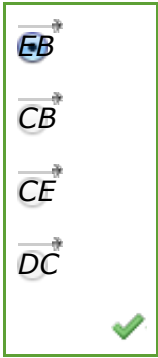Name all the equal vectors in the parallelogram shown.

$\overrightarrow{AB}$ is equal to _____?

- $\overrightarrow{DC}$
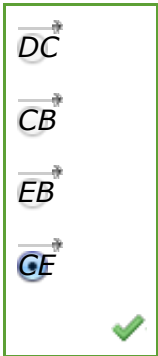- $\overrightarrow{EB}$
- $\overrightarrow{CE}$
- $\overrightarrow{CB}$

  ✔

$\overrightarrow{DA}$ is equal to _____?

- $\overrightarrow{DC}$
- $\overrightarrow{CB}$
- $\overrightarrow{EB}$
- $\overrightarrow{CE}$

  ✔

$\overrightarrow{DE}$ is equal to _____?

$\overrightarrow{EB}$

$\overrightarrow{CB}$

$\overrightarrow{CE}$

$\overrightarrow{DC}$

✔

$\overrightarrow{EA}$ is equal to _____?

$\overrightarrow{DC}$

$\overrightarrow{CB}$

$\overrightarrow{EB}$

$\overrightarrow{GE}$

✔

Need Help? [Read It] [Chat About It]