

Homework Examples 5

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1) $d = 10$

For this problem I drew a graph and drew a triangle. Then I did the Pythagorean theorem which was $d^2 = 8^2 + 6^2$ which equals $64 + 36 = 100$. After that you square root 100 and you get an answer of 10. I found this question easy.

3) $(x - 8)^2 + (y + 10)^2 = 64$

For this problem I found the formula for the equation of a circle which is $(x - h)^2 + (y - k)^2 = r^2$ and plugged the numbers in and got the answer.

5) $(x - 7)^2 + (y + 2)^2 = r^2$

I figured this question out by drawing a graph and also drawing a triangle. Then I used the formula for equation of a circle and plugged the numbers in and got the answer.

7) $(x - 5)^2 + (y - 8)^2 = 13$

I got this answer by getting the points and then using the equation of a circle and plugged in the points to write the equation.

9)

I got this by plugging in the equation in DESMOS.

11) $y = (0, 3 + \sqrt{5})$ and $(0, 3 - \sqrt{5})$

I figured out this question by plugging in the points into the equation of a circle and then solving from there I got the answer.

13) (1.342 , 7.683)

I had trouble with this question so I watched some videos and used to the

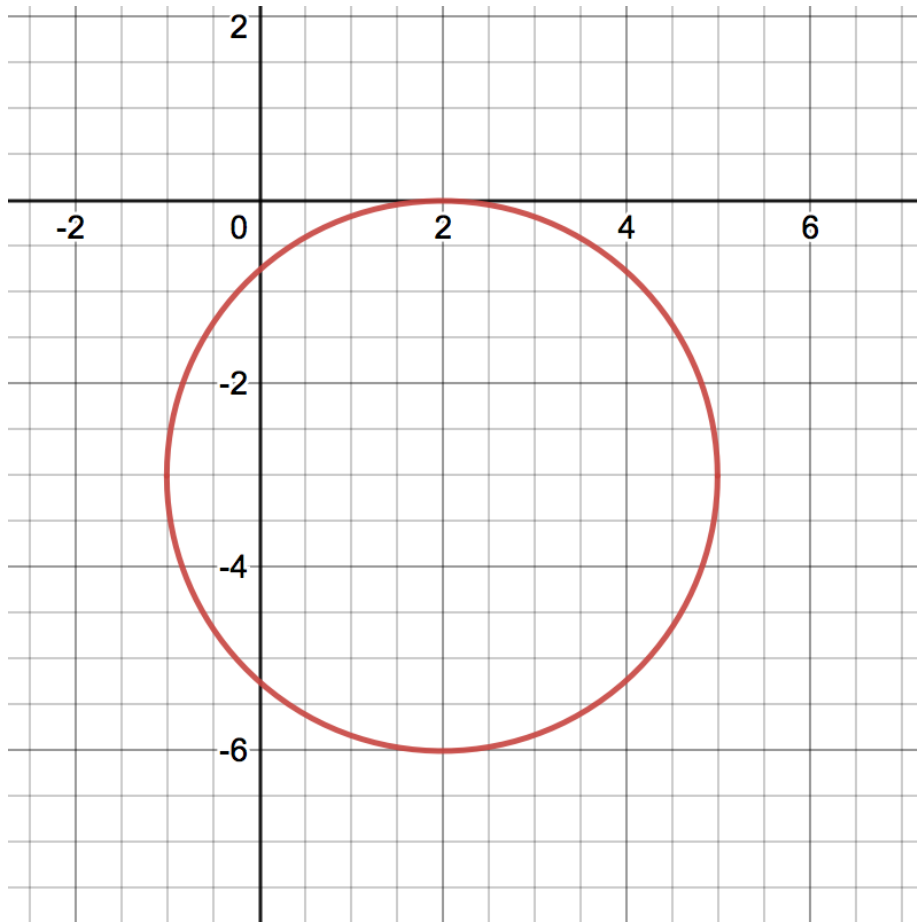


Figure 1: Page 343 9

book as reference and than I tried it and had help from the solutions manual to answer this question.

17) 29.87 miles

I got this answer by plugging in the points $(0, 70)$ and $(74, 0)$ and radius = 53 into the equation of a circle and than solved from there to get the answer.

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5) 150°

I got this answer by converting $5\pi/6$ into degrees by using the formula of $1 = 180^\circ/\pi$.

11) $8\pi/9$

I got this answer by by using the formula for converting degrees to radians. That formula is $\pi/180^\circ = 1$. I plugged in the numbers and got the answer.

17) 8π cm

I got this answer by getting all the important information like the circle radius and the center angle and then convert from degrees to radians.

25) 630.25 rotations per minute

For this question I used the distance formula and plugged in the numbers.

29) $v = 1.257$ m/sec

I had a lot of trouble with this question so I used to solutions manual to help me out and see step by step how to answer the question.

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1) a) Quadrant 3 b) Quadrant 2

For this question I used the equations they gave us which was $\sin(t) \geq 0$ and $\cos(t) \geq 0$ for part a. For part b they gave us $\sin(t) \leq 0$ and $\cos(t) \geq 0$.

3) $x = -4/5$

For this question I used the information they gave us to solve for x. In the

question they gave us the y which was $3/5$ and the quadrant with was 2.

$$5) - 4\sqrt{3}/7$$

$$7) - \sqrt{55}/8$$

I figured out both these questions by using the formulas they showed me in the videos and I plugged in the numbers and found the answer.

$$11) a) - \sqrt{2}/2 \quad b) - \sqrt{3}/2 \quad c) 1/2 \quad d) - \sqrt{2}/2$$

$$13) a) - \sqrt{2}/2 \quad b) \sqrt{3}/2 \quad c) 0 \quad d) -1$$

For both of these questions I had a lot of trouble trying to figure them out so I used the solutions manual and videos to show me how to answer step by step.

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$$3) \sec = -2\sqrt{3}/3$$

$$\csc = 2$$

$$\tan = -\sqrt{3}/3$$

$$\cot = -\sqrt{3}$$

$$11) \sin = -2\sqrt{2}/3$$

$$\csc = -3\sqrt{2}/4$$

$$\sec = -3$$

$$\tan = 2\sqrt{2}$$

$$\cot = \sqrt{2}/4$$

I figured out questions 3 and 11 by doing the formula and plugging in the numbers and figured out each one.

$$21) \tan(t)$$

For this question I had absolutely no idea what I was doing but I watched some videos and looked at the solutions manual and it explained it very well but this was a very tricky question.

$$29) \sin(a) * \tan(a)$$

For this question all you had to do was divide by cosine and then multiply by sin over cosine and then you get the answer.

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$$1) \sin (a) = 5/\sqrt{41}$$

$$\cos (a) = 4/\sqrt{41}$$

$$\tan (a) = 5/4$$

$$\sec (a) = \sqrt{41}/4$$

$$\csc (a) = \sqrt{41}/5$$

$$\cot (a) = 4/5$$

For this question I watched a video than drew a triangle and plugged in the numbers and then used the formulas for each one to solve.

$$3) B = 60^\circ c = 14 b = 7/\sqrt{3}$$

For this question I also drew a triangle and put in the numbers than after that I used the formulas to solve which were the tangent formula and the cosine formula.

$$11) 836.26984 \text{ ft}$$

For this question I drew a triangle to resemble a buildings height and than I used the tangent formula and than after I con the answer in miles I converted that to feet which is how I got the answer.

$$21) = 86.6685$$

For this question I drew the question out and plugged in the numbers and than I figured out the bottom of the first triangle and than found the whole triangle and subtracted by the first triangle to get the answer.

$$23) 15434.2842 \text{ ft}$$

For this question I did not know what to do so I used the solutions manual and checked over step by step how to solve.