Math 1330
Homework 9 (8.2b)

Problem 8.2.4 refers to problem 4 in Chapter 8, Section 2 of the online text. Record your answers to all the problems in the EMCF titled "**Homework 9**."

1.   Problem 8.2.4

A. $(x+3)^2+(y-1)^2=64$

B. $\dfrac{(x+3)^2}{16}+\dfrac{(y-1)^2}{4}=1$

C. $16(x+3)^2+4(y-1)^2=1$

D. $\dfrac{(x+3)^2}{16}+\dfrac{(y+1)^2}{4}=1$

E.   None of the above

2.   Problem 8.2.6

A. $(x-7)^2+(y-3)^2=8$

B. $\dfrac{(x+7)^2}{8}+\dfrac{(y+3)^2}{2}=1$

C. $\dfrac{(x-7)^2}{2}+\dfrac{(y-3)^2}{6}=1$

D. $\dfrac{(x-7)^2}{8}+(y-3)^2=1$

E.   None of the above

3.   Problem 8.2.8

A. $\dfrac{\left(x+\dfrac{2}{3}\right)^2}{18}+\dfrac{\left(y-\dfrac{1}{3}\right)^2}{9}=1$

B. $\dfrac{\left(x+\dfrac{2}{3}\right)^2}{9}+\dfrac{\left(y-\dfrac{1}{3}\right)^2}{18}=1$

C. $\dfrac{\left(x-\dfrac{2}{3}\right)^2}{9}+\dfrac{\left(y+\dfrac{1}{3}\right)^2}{18}=1$

D. $\dfrac{\left(x-\dfrac{2}{3}\right)^2}{18}+\dfrac{\left(y+\dfrac{1}{3}\right)^2}{9}=1$

E.   None of the above

4.   Problem 8.2.14 c

    A. $\left(0,1\pm\sqrt{5}\right)$; $2\sqrt{5}$

    B. $\left(0,-1\pm\sqrt{5}\right)$; $2\sqrt{5}$

    C.   (3, 1) and (–3, 1);   6

    D.   (3, –1) and (–3, –1);   6

    E.   None of the above

5.   Problem 8.2.24 b

    A.   (3, 0)

    B.   (0, 3)

    C.   (0, –3)

    D.   (–3, 0)

    E.   None of the above

6.   Problem 8.2.26   a b

    A. $\dfrac{(x+2)^2}{9}+\dfrac{(y-3)^2}{25}=1$; center (–2, 3)   B. $\dfrac{(x-2)^2}{25}+\dfrac{(y+3)^2}{9}=1$, center (2, 3)

    C. $\dfrac{(x-2)^2}{9}+\dfrac{(y+3)^2}{25}=1$; center (2, –3)   D. $\dfrac{(x-2)^2}{9}-\dfrac{(y+3)^2}{25}=1$; center (2, 3)

    E. $\dfrac{(x-2)^2}{25}+\dfrac{(y-3)^2}{9}=1$; center (2, 3)

7.   Problem 8.2.26: State the coordinates of the vertices of the major axis and the
                      coordinates of the vertices of the minor axis.

    A.   Major axis (2, 2) and (2, –8),   minor axis (–1, –3) and (5, –3)

    B.   Major axis (–3, –3) and (7, –3),   minor axis (2, 0) and (2, –6)

    C.   Major axis (2, 2) and (2, –8),   minor axis (–3, –3) and (7, –3)

    D.   Major axis (0, 5) and (0, –5),   minor axis is (3, 0) and (–3, 0)

    E.   Major axis (–2, 2) and (–2, –8),   minor axis (1, –3) and (–5, –3)

8.   Problem 8.2.26: State the coordinates of one of the foci and state the eccentricity.

A. $(6, -3)$, $e = \dfrac{5}{4}$ B. $(0, 4)$, $e = \dfrac{4}{5}$

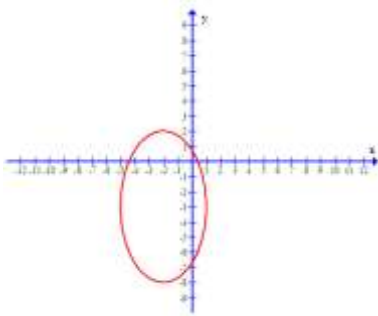C. $(-2, 1)$, $e = \dfrac{4}{5}$ D. $(2, 5)$, $e = \dfrac{5}{4}$

E. $(2, -7)$, $e = \dfrac{4}{5}$
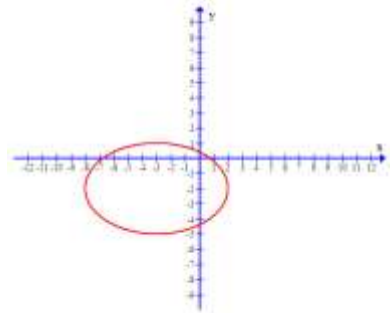
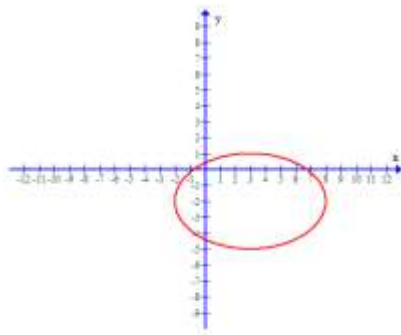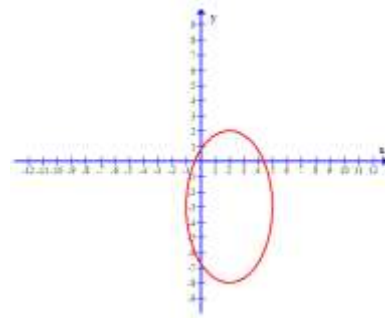9.   Problem 8.2.26: Which of these could be the graph of the ellipse?

A.   B.
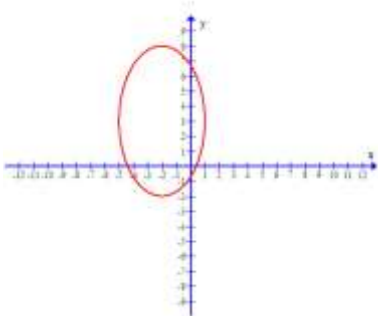

C.   D.

E.

10. Problem 8.2.28 c

   A. $(2, 3)$ and $(2, -5)$; 8

   B. $(4, -1)$ and $(0, -1)$; 2

   C. $(2, 3)$ and $(2, -5)$; 6

   D. $(0, 2)$ and $(0, -2)$; 4

   E. None of the above

11. Problem 8.2.34

   A. $\dfrac{(x-2)^2}{25} + \dfrac{(y-1)^2}{1} = 1$

   B. $\dfrac{(x-2)^2}{100} + \dfrac{(y-1)^2}{4} = 1$

   C. $\dfrac{(x-2)^2}{1} + \dfrac{(y-1)^2}{25} = 1$

   D. $\dfrac{(x-2)^2}{4} + \dfrac{(y-1)^2}{100} = 1$

   E. $\dfrac{(x-2)^2}{4} + \dfrac{(y-1)^2}{25} = 1$

12. Problem 8.2.38

   A. $\dfrac{(x+2)^2}{80} + \dfrac{(y-1)^2}{64} = 1$

   B. $\dfrac{(x-2)^2}{64} + \dfrac{(y+1)^2}{16} = 1$

   C. $\dfrac{(x+2)^2}{48} + \dfrac{(y-1)^2}{64} = 1$

   D. $\dfrac{(x+2)^2}{4} + \dfrac{(y-8)^2}{25} = 1$

   E. None of the above

13. Problem 8.2.40

A. $\dfrac{(x-2)^2}{9}+\dfrac{(y-4)^2}{16}=1$

B. $\dfrac{(x-2)^2}{25}+\dfrac{(y-4)^2}{9}=1$

C. $\dfrac{(x-2)^2}{16}+\dfrac{(y-4)^2}{9}=1$

D. $\dfrac{(x+2)^2}{16}+\dfrac{(y+4)^2}{9}=1$

E. None of the above

14. Problem 8.2.48

A. $\dfrac{x^2}{25}+\dfrac{y^2}{36}=1$

B. $\dfrac{(x-1)^2}{36}+\dfrac{(y-1)^2}{11}=1$

C. $\dfrac{x^2}{36}+\dfrac{y^2}{11}=1$

D. None of the above

15. Use the given features to write an equation for the ellipse in standard form.
    Center (–4, –5)
    Length of major axis = 5
    Length of minor axis =3
    Vertical Major Axis

A. $\dfrac{(x-4)^2}{\left(\dfrac{9}{4}\right)}+\dfrac{(y-5)^2}{\left(\dfrac{25}{4}\right)}=1$

B. $\dfrac{(x+4)^2}{\left(\dfrac{9}{4}\right)}+\dfrac{(y+5)^2}{\left(\dfrac{25}{4}\right)}=1$

C. $\dfrac{(x-4)^2}{\left(\dfrac{25}{4}\right)}+\dfrac{(y-5)^2}{\left(\dfrac{9}{4}\right)}=1$

D. $\dfrac{(x+4)^2}{\left(\dfrac{25}{4}\right)}+\dfrac{(y+5)^2}{\left(\dfrac{9}{4}\right)}=1$

E. None of the above.