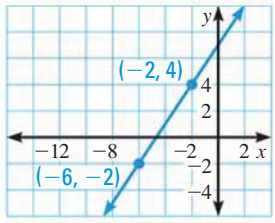
44. CHALLENGE Two microphones placed 1 mile apart record the bugling of a bull elk. Microphone A receives the sound 2 seconds after microphone B. Sound travels at 1100 feet per second. Is this enough information to determine where the elk is located? If so, give the location. If not, explain why not.

MIXED REVIEW FOR TAKS

TAKS PRACTICE at classzone.com

REVIEW Lesson 2.3; TAKS Workbook

45. TAKS PRACTICE Which equation does the graph represent? *TAKS Obj. 1*



(A) $-3x + 2y = 14$

(B) $-2x + 3y = 6$

(C) $2x + 3y = -18$

(D) $3x + 2y = 1$

REVIEW Lesson 9.1; TAKS Workbook

46. TAKS PRACTICE The endpoints of a diameter of a circle are $(-5, 8)$ and $(9, -3)$. What is the center of the circle? *TAKS Obj. 7*

(F) $\left(-8, \frac{17}{2}\right)$ (G) $(2, 3)$ (H) $\left(2, \frac{5}{2}\right)$ (J) $\left(7, -\frac{11}{2}\right)$

QUIZ *for Lessons 9.4–9.5*

Graph the equation. Identify the vertices, co-vertices, and foci of the ellipse. *(p. 634)*

1. $\frac{x^2}{25} + \frac{y^2}{4} = 1$ **2.** $\frac{x^2}{16} + \frac{y^2}{49} = 1$ **3.** $36x^2 + 9y^2 = 324$

Write an equation of the ellipse with the given characteristics and center at (0, 0). *(p. 634)*

4. Vertex: $(0, 5)$
Co-vertex: $(-4, 0)$

5. Vertex: $(10, 0)$
Focus: $(-8, 0)$

6. Co-vertex: $(-\sqrt{15}, 0)$
Focus: $(0, -5)$

Graph the equation. Identify the vertices, foci, and asymptotes of the hyperbola. *(p. 642)*

7. $\frac{y^2}{25} - \frac{x^2}{64} = 1$ **8.** $4x^2 - 16y^2 = 64$ **9.** $12y^2 - 20x^2 = 240$

Write an equation of the hyperbola with the given foci and vertices. *(p. 642)*

10. Foci: $(-5, 0), (5, 0)$
Vertices: $(-2, 0), (2, 0)$

11. Foci: $(0, -3), (0, 3)$
Vertices: $(0, -1), (0, 1)$

12. Foci: $(-3\sqrt{6}, 0), (3\sqrt{6}, 0)$
Vertices: $(-3, 0), (3, 0)$

13. ASTEROIDS The largest asteroid, 1 Ceres, ranges from 2.55 astronomical units to 2.98 astronomical units from the sun, which is located at one focus of the asteroid's elliptical orbit. Find a and c. Then write an equation of the orbit of 1 Ceres. *(p. 634)*