Name

12-7B Lesson Master

Questions on SPUR Objectives
See Student Edition pages 862–865 for objectives.

SKILLS Objective A

In 1–4, rewrite the equation in standard form $Ax^2 + Bxy + Cy^2 + Dx + Ey + F = 0$.

1. $\frac{x^2}{25} + \frac{y^2}{4} = 1$

2. $y = 4(x - 2)^2 - 5$

3. $(x + 8)(y - 7) = 30$

4. $\frac{x^2}{100} + \frac{y^2}{25} = 1$

5. $y = \pm 2\sqrt{x^2 - 3}$

6. $2(x + 1)^2 + (y - 4)^2 = 9$

7. $xy = 72$

8. $\frac{x^2}{36} + \frac{y^2}{49} = 1$

9. $\frac{x^2}{25} - \frac{y^2}{9} = 1$

10. $(x + 5)^2 + (y - 2)^2 = 16$

11. $3y = \pm \sqrt{2x^2 - 16}$

12. $y = \frac{3}{x}$

SKILLS Objective B

In 13 and 14, write an equation for a hyperbola meeting the given conditions in the standard form of a quadratic equation.

13. foci $(-8, -8)$ and $(8, 8)$ and focal constant 16

14. foci $(3, 3)$ and $(-3, -3)$ and asymptotes $x = 0$ and $y = 0$

PROPERTIES Objective E

In 15 and 16, find a. the foci, b. the focal constant, and c. the asymptotes of the hyperbola.

15. $y = \frac{7}{x}$

a. b. c.

16. $xy = 16$

a. b. c.

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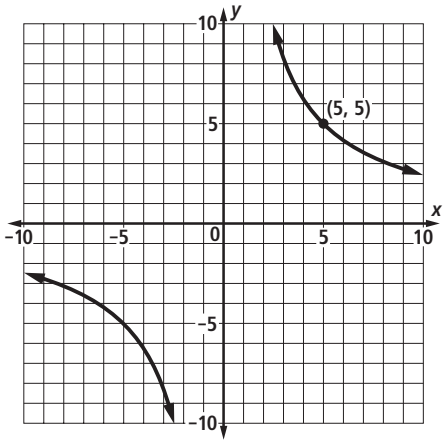
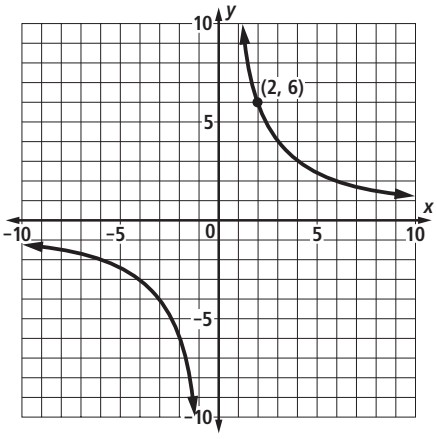
REPRESENTATIONS Objective I

In 17–20, write the equation of the given hyperbola.

17.



18.



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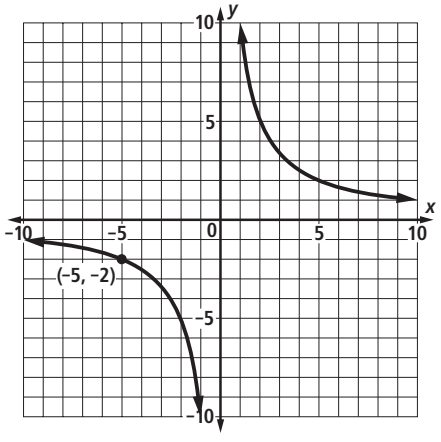

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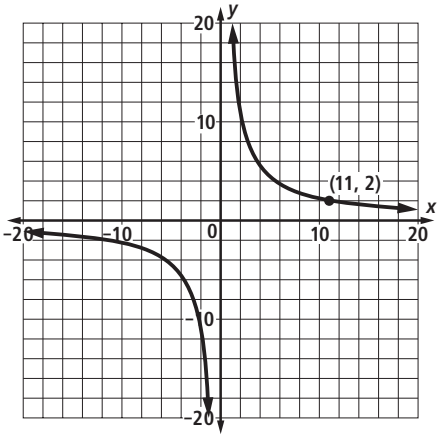
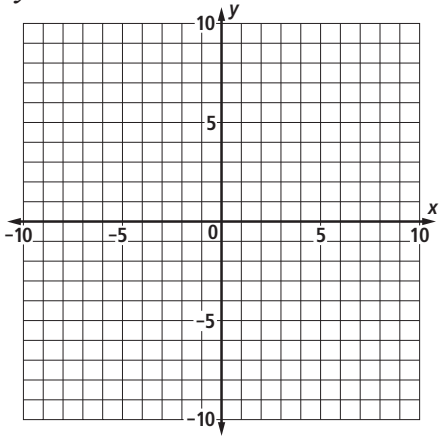


In 21 and 22, graph the hyperbolic equation below each question.

21. $xy = 32$



22. $xy = 24$