Topic: <u>Hyperbolas - Write the equation in standard form - Worksheet 1</u> Write the standard equation of each Hyperbola:

$$49x^2 - y^2 = 49$$

$$x^2/81 - (y + 2)^2/64 = 1$$

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

$$x^2/4 - 4y^2/100 = 4$$

$$64x^2 - (y + 4)^2 = 64$$

$$x^2 - 6y^2 = 54$$

$$4x^2/4 - y^2/4 = 16$$

$$49x^2 - 7y^2 - 49 = 0$$

$$169x^2 - y^2 = 169$$

$$(x + 4)^2/144 - y^2/121 = 1$$

Topic: Hyperbolas - Write the equation in standard form - Worksheet 2 Write the standard equation of each Hyperbola:

$$4x^2 - 9y^2 = 36$$

$$x^2/121 - (y + 4)^2/196 = 1$$

**3**. 
$$(x-3)^2/81-y^2/25=1$$
 **4**.

$$3x^2/81 - 3y^2/9 = 3$$

$$121x^2 - (y + 4)^2 = 121$$

$$7x^2 - y^2/7 = 7$$

$$8x^2/1 - y^2/4 = 32$$

$$16x^2 - 4y^2 - 64 = 0$$

$$4x^2 - y^2 = 16$$

$$(x + 4)^2/36 - y^2/25 = 1$$

Topic: Hyperbolas - Write the equation in standard form - Worksheet 3 Write the standard equation of each Hyperbola:

$$9x^2 - 4y^2 = 36$$

$$x^2/144 - (y + 3)^2/256 = 1$$

3. 
$$(x-2)^2/64-y^2/9=1$$

$$x^2/16 - 2y^2/8 = 4$$

5. 
$$144x^2 - (y + 3)^2 = 144$$

$$6x^2 - y^2/6 = 6$$

$$4x^2/1 - y^2/9 = 16$$

$$15x^2 - 5y^2 - 75 = 0$$

$$3x^2 - y^2 = 27$$

$$(x + 6)^2/64 - y^2/16 = 1$$

Topic: <u>Hyperbolas - Write the equation in standard form - Worksheet 4</u>
Write the standard equation of each Hyperbola:

6.

1. 
$$5x^2 - 45y^2 = 45$$

2. 
$$x^2/196 - (y + 2)^2/225 = 1$$

3. 
$$(x-1)^2/81 - y^2/16 = 1$$
 4.

$$x^2/27 - 3y^2/9 = 3$$

5. 
$$100x^2 - (y + 3)^2 = 100$$

$$5x^2 - y^2/5 = 5$$

7. 
$$2x^2/1 - y^2/2 = 8$$

8. 
$$25x^2 - 4y^2 - 100 = 0$$

9. 
$$4x^2 - y^2 = 36$$

**10.** 
$$(x + 5)^2/81 - y^2/9 = 1$$

Topic: <u>Hyperbolas - Write the equation in standard form - Worksheet 5</u>
Write the standard equation of each ellipse:

1. 
$$5x^2 - 25y^2 = 25$$

2. 
$$x^2/169 - (y + 2)^2/324 = 1$$

3. 
$$(x - 4)^2/64 - y^2/16 = 1$$
 4.

$$x^2/49 - 4y^2/16 = 4$$

5. 
$$289x^2 - (y + 4)^2 = 289$$

**6.** 
$$8x^2 - y^2/8 = 8$$

7. 
$$7x^2/1 - y^2/4 = 28$$

8. 
$$25x^2 - 5y^2 - 125 = 0$$

9. 
$$9x^2 - y^2 = 36$$

**10.** 
$$(x + 5)^2/25 - y^2/16 = 1$$