

Name: \_\_\_\_\_

Information Needed to Solve 2-D Area

The first step to determining two-dimensional area is knowing what **base area** formula to use. The next step is identifying what information you need to plug into that formula. In order to do that, you need to know what the formulas mean, and how to find the parts.

$A$  = Area of the Base Figure (also represented with a  $B$ )

$b$  = base *side* on a two-dimensional figure (meets the height at a right angle)

$h$  = height of the Base Figure or the *distance between base sides* (always meets the base side at a right angle)


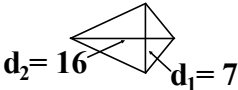
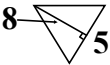
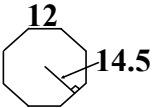
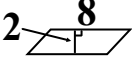



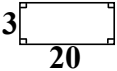
$r$  = radius of the circle

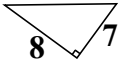

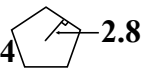
$d$  = diagonal

$a$  = apothem (the "radius" of polygon that meets the side at a right angle)

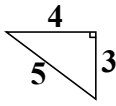
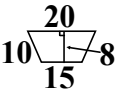
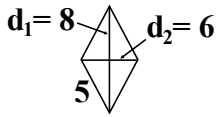
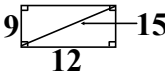
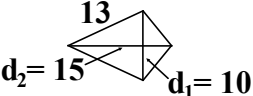

$P$  = Perimeter of the Base Figure (found by adding all of the sides or, for circles, using the formula  $P = 2\pi r$ )

For each given figure, identify the shape, write the **base area** formula, and identify the parts needed to solve for area.

<p><b>EXAMPLE</b></p>  <p>Shape: <input type="text" value="Trapezoid"/></p> <p>Base Area Formula:</p> $A = \frac{(b_1 + b_2)h}{2}$ <p>Value of parts in area formula:  <input type="text" value="b1 = 6, b2 = 2, h = 3"/></p> <p><i>The bases are the parallel sides. The height meets them at a right angle.</i></p>	<p>1.</p>  <p>Shape: _____</p> <p>Base Area Formula: _____</p> <p>Value of parts in area formula: _____</p>	<p>2.</p>  <p>Shape: _____</p> <p>Base Area Formula: _____</p> <p>Value of parts in area formula: _____</p>
<p>3.</p>  <p>Shape: _____</p> <p>Base Area Formula: _____</p> <p>Value of parts in area formula:  <i>To find P, add all sides (they're all 12).</i></p>	<p>4.</p>  <p>Shape: _____</p> <p>Base Area Formula: _____</p> <p>Value of parts in area formula: _____</p>	<p>5.</p>  <p>Shape: _____</p> <p>Base Area Formula: _____</p> <p>Value of parts in area formula: _____</p>
<p>6.</p>  <p>Shape: _____</p> <p>Base Area Formula: _____</p> <p>Value of parts in area formula: _____</p>	<p>7.</p>  <p>Shape: _____</p> <p>Base Area Formula: _____</p> <p>Value of parts in area formula: _____</p>	<p>8.</p>  <p>Shape: _____</p> <p>Base Area Formula: _____</p> <p>Value of parts in area formula: _____</p>

<p>9.</p>  <p>Shape:</p> <p>Base Area Formula:</p> <p>Value of parts in area formula:</p>	<p>10.</p>  <p>Shape:</p> <p>Base Area Formula:</p> <p>Value of parts in area formula:</p>	<p>11.</p>  <p>Shape:</p> <p>Base Area Formula:</p> <p>Value of parts in area formula:</p>
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Identify the shape, write the **base area** formula, identify the parts needed to solve for area, and identify the **distractor** (extra information included to distract you from the problem).

<p><b>EXAMPLE</b></p>  <p>Shape: <input type="text" value="Triangle"/></p> <p>Base Area Formula:</p> $A = \frac{bh}{2}$ <p>Value of parts in area formula:</p> $b = 4, h = 3$ <p><i>Since both the base and height (which meet at a right angle) are sides, I could have made either one the base.</i></p> <p>Distractor Information:</p> <input type="text" value="The hypotenuse is 5."/>	<p>12.</p>  <p>Shape:</p> <p>Base Area Formula:</p> <p>Value of parts in area formula:</p> <p>Distractor Information:</p>	<p>13.</p>  <p>Shape:</p> <p>Base Area Formula:</p> <p>Value of parts in area formula:</p> <p>Distractor Information:</p>
<p>14.</p>  <p>Shape:</p> <p>Base Area Formula:</p> <p>Value of parts in area formula:</p> <p>Distractor Information:</p>	<p>15.</p>  <p>Shape:</p> <p>Base Area Formula:</p> <p>Value of parts in area formula:</p> <p>Distractor Information:</p>	<p>16.</p>  <p>Shape:</p> <p>Base Area Formula:</p> <p>Value of parts in area formula:</p> <p>Distractor Information:</p>