



(Ipka, Iran Potk Educational Tools)

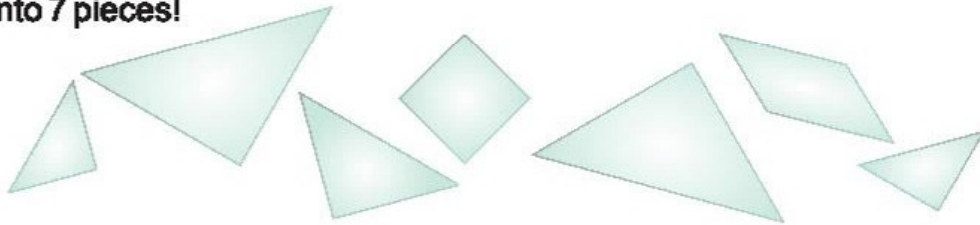
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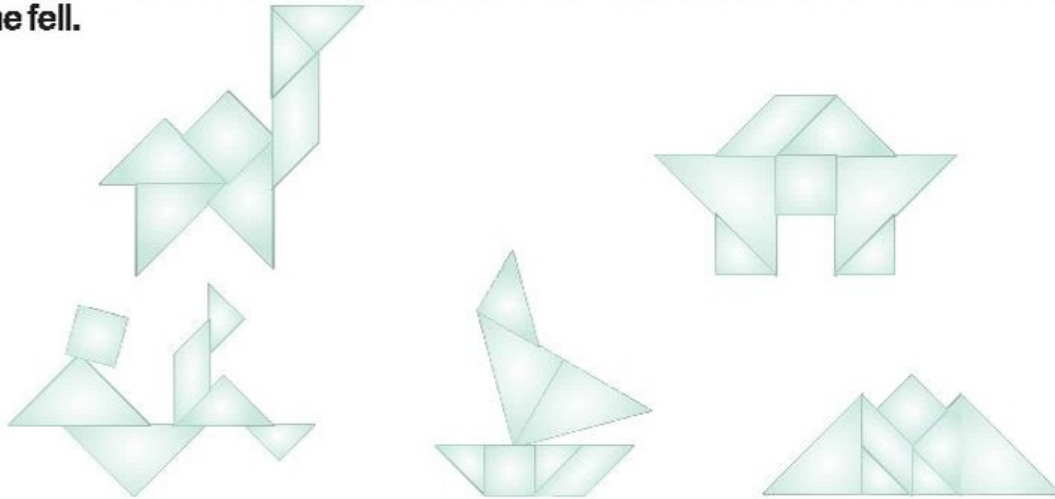


The Legend of the Tangram

Once upon a time an emperor of China asked a glass maker to make him a beautiful piece of glass shaped like a square. The glass maker, named Mr. Tan, worked very hard and created a beautiful square piece of glass using all bright colors. Mr. Tan wanted to deliver the glass to the emperor himself to insure a safe delivery. Upon completion of the square, he started on his journey to the castle. The journey was long. Mr. Tan crossed a desert and rivers, he traveled through forests and fields. He arrived at a rugged mountain range and climbed to the summit of a high, rocky peak. At the top of the mountain he looked into the distance and glimpsed the palace he was traveling to. Pleased that he had almost arrived, Mr. Tan got very excited and tripped. He dropped the piece of glass and it broke into 7 pieces!



Mr. Tan was very upset thinking the emperor would be angry with him. As he contemplated about what to do, he noticed that the broken pieces of glass looking like different figures, called grams. He decided to use these grams to tell stories to the emperor. In the castle, he moved the shapes around and made images to describe his journey for the emperor. He showed the king his home, a camel he had seen in the desert, monks he met on his way, a boat on the river he crossed and the mountain range where he fell.



When Mr. Tan told his stories, emperor loved them, and named his figures, Tan Grams, meaning Mr. Tan's pictures. He had the shapes recreated in wood. Tangrams were invented. This spread throughout the country and from them on all of China used the Tan Grams to tell stories.



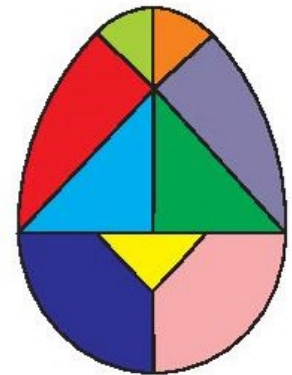
The ancient Chinese art of tangram puzzles is a popular mathematical problem solving activity, finely tuned to bring out the best in pupils.

This logic game brings the mathematical thought of Asia and incorporates it with bright colors and charming figures.

The tangram puzzle consists of 7 geometric pieces which are normally boxed in the shape of a square. The pieces, called 'tans', are used to create different patterns including animals, people, numbers, geometric shapes and many more. The possibilities are endless. They are simple to play and suitable for all ages.



Oval Tangram is another shape in tangram puzzles, made of an oval divided into 9 pieces, that can be arranged to match particular designs like different kinds of birds.



playing with tangrams may help kids

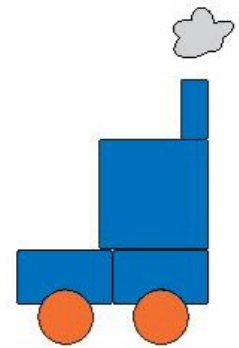
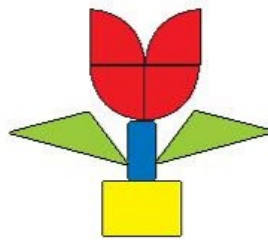
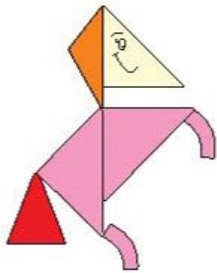
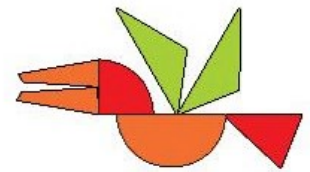
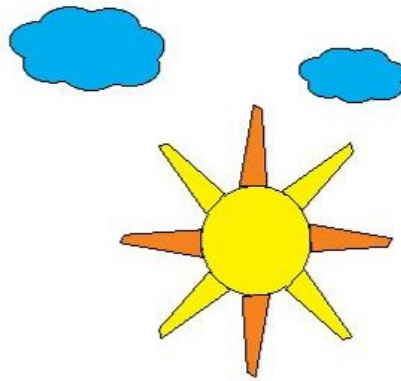
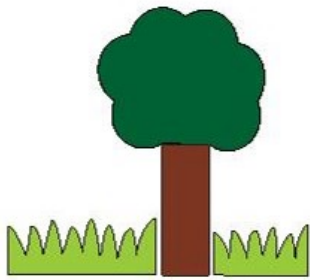
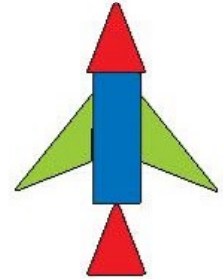
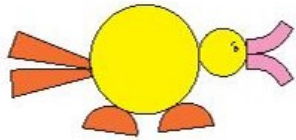
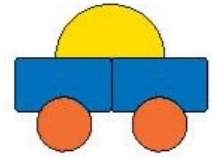
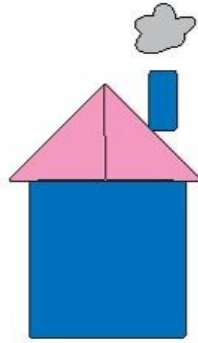
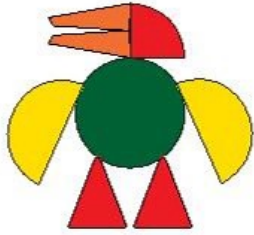
- classify shapes
- develop positive feelings about geometry
- gain a stronger grasp of spatial relationships
- hone spatial rotation skills
- acquire a precise vocabulary for manipulating shapes (e.g., "flip," "rotate")
- learn the meaning of "congruent"

The classic rules are simple : all tangram pieces (or tans) must be used, they must lay flat, all must touch and none may overlap.



Fantasy patterns

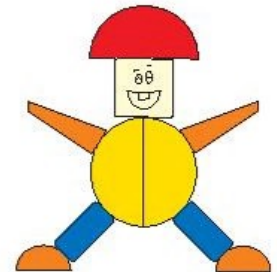
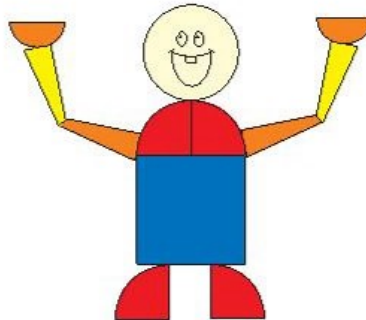
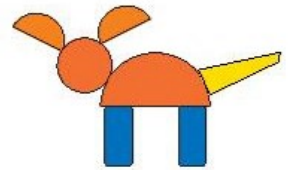
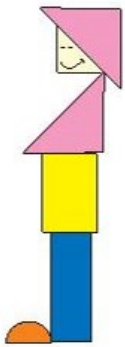
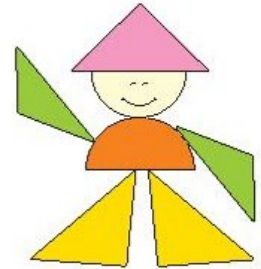
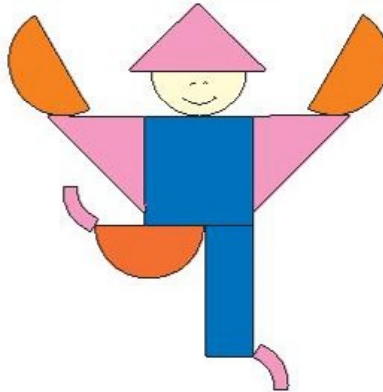
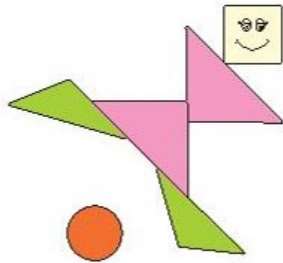
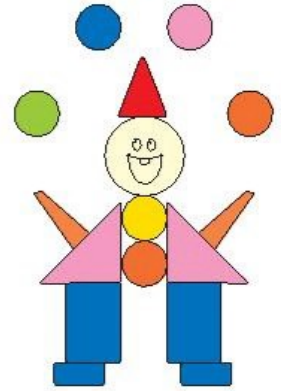
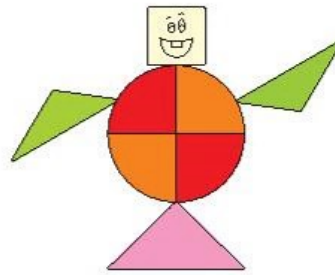
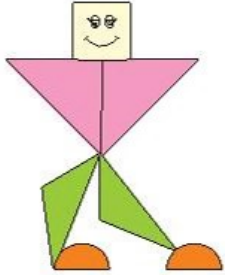
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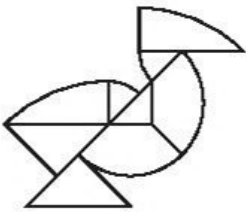
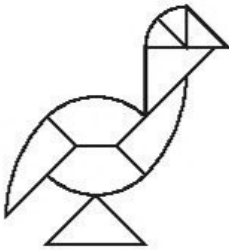
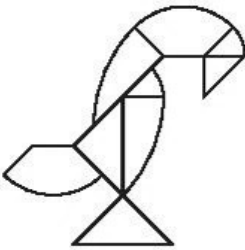
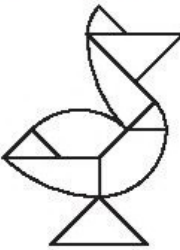
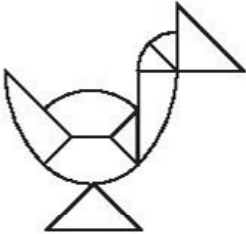
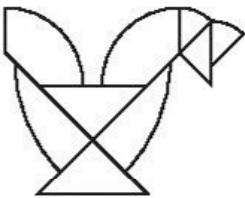
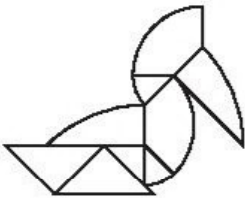
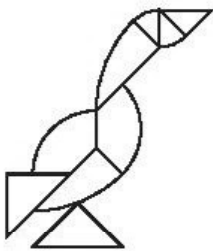
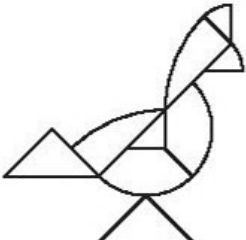
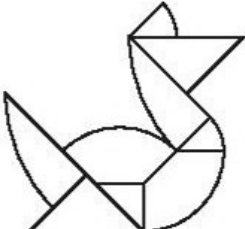
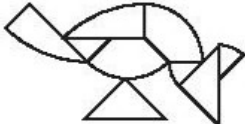
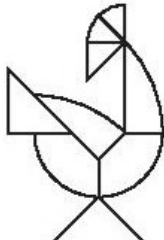
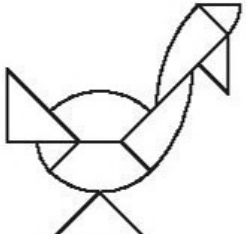
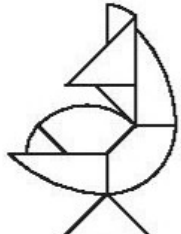
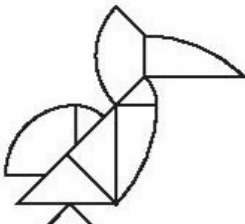
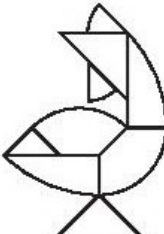
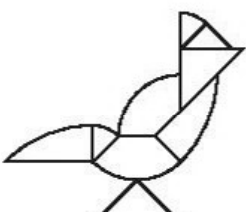
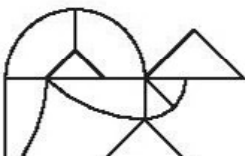
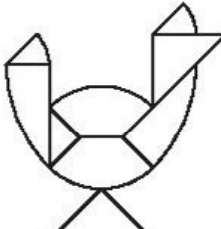
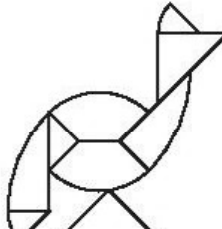
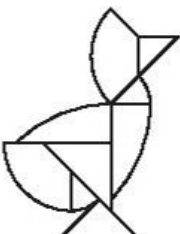
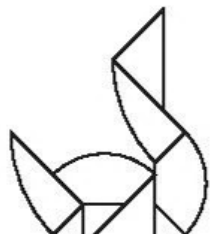
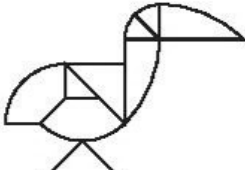
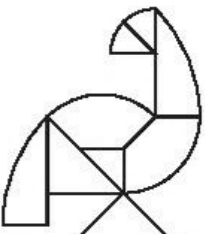
Fantasy patterns

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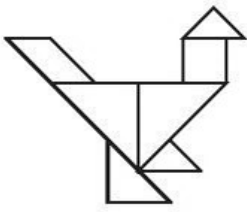
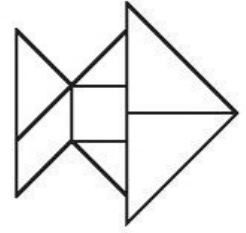
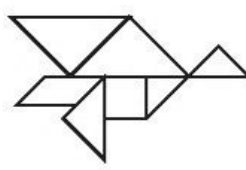
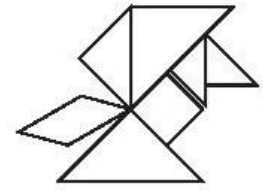
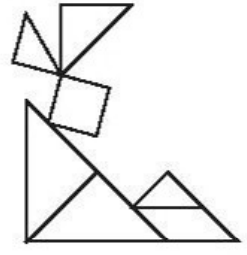
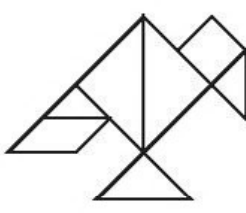
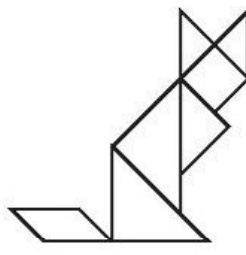
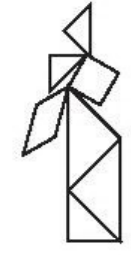
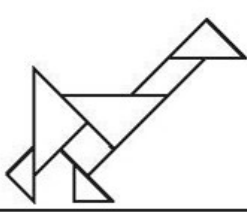
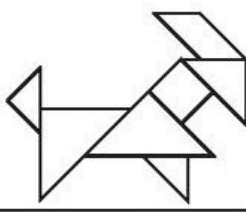
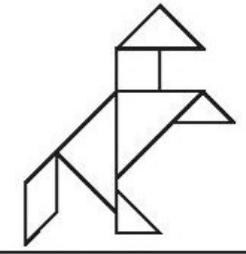
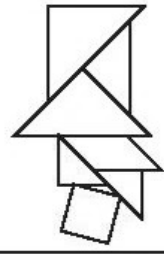
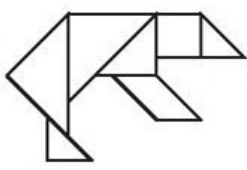
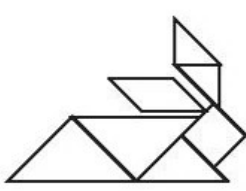
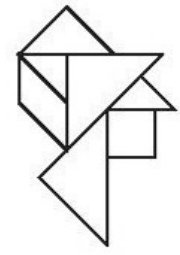
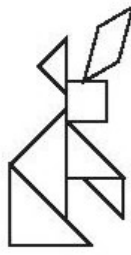
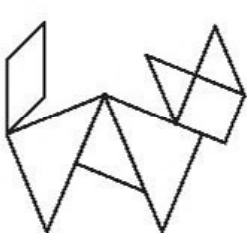
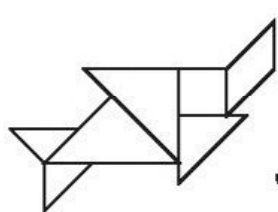
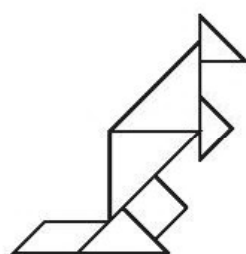
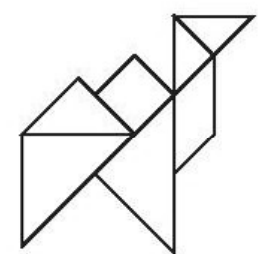
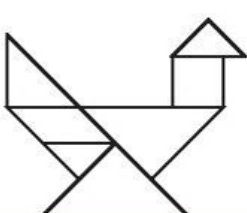
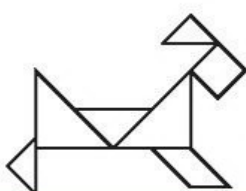
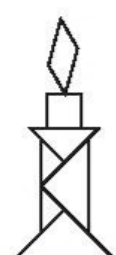
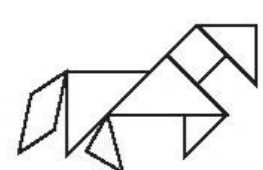


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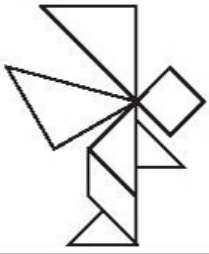
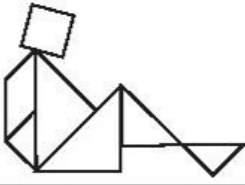
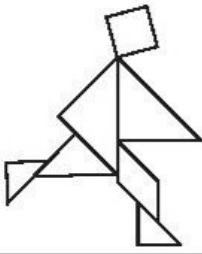

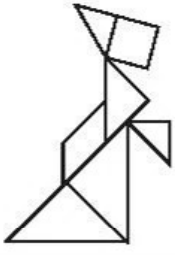
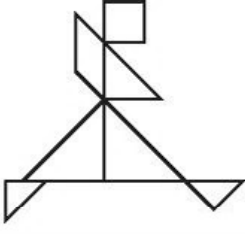
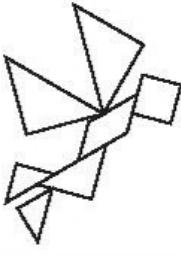

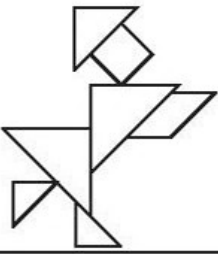
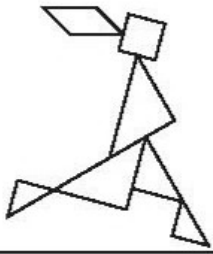
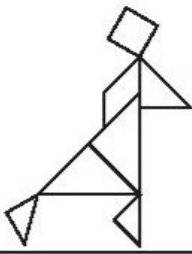

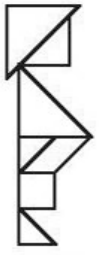
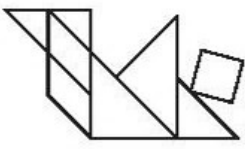
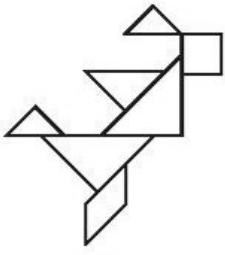
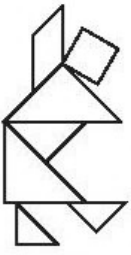
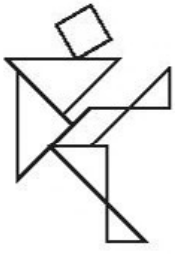
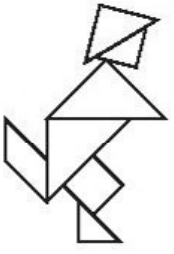
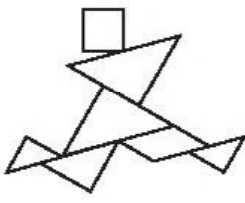
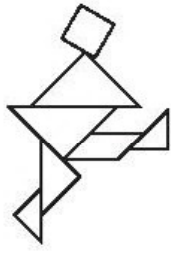
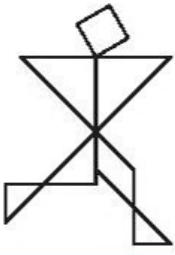
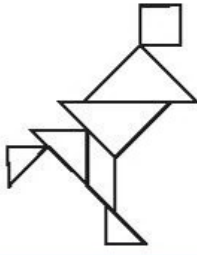
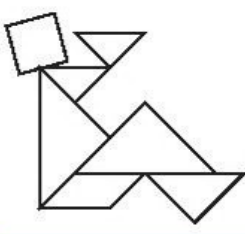
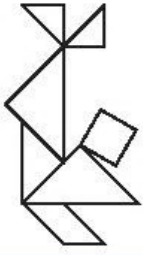
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<p>38</p>	<p>37</p>	<p>36</p>	<p>35</p>
<p>34</p>	<p>33</p>	<p>32</p>	<p>31</p>
<p>30</p>	<p>29</p>	<p>28</p>	<p>27</p>
<p>26</p>	<p>25</p>	<p>24</p>	<p>23</p>
<p>22</p>	<p>21</p>	<p>20</p>	<p>19</p>
<p>18</p>	<p>17</p>	<p>16</p>	<p>15</p>
<p>14</p>	<p>13</p>	<p>12</p>	<p>11</p>
<p>10</p>	<p>9</p>	<p>8</p>	<p>7</p>



 ۲۸	 ۲۷	 ۲۶	 ۲۵
 ۲۲	 ۳۱	 ۳۰	 ۲۹
 ۲۶	 ۲۵	 ۲۴	 ۲۳
 ۳۰	 ۲۹	 ۲۸	 ۲۷
 ۳۴	 ۳۳	 ۳۲	 ۳۱
 ۳۸	 ۳۷	 ۳۶	 ۳۵







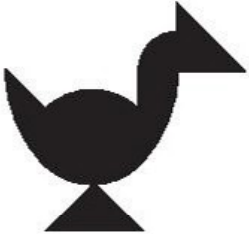


















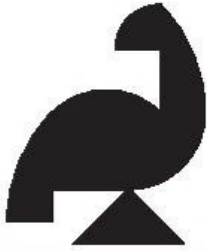


 ۴	 ۳	 ۲	 ۱
 ۸	 ۷	 ۶	 ۵
 ۱۲	 ۱۱	 ۱۰	 ۹
 ۱۶	 ۱۵	 ۱۴	 ۱۳
 ۲۰	 ۱۹	 ۱۸	 ۱۷
 ۲۴	 ۲۳	 ۲۲	 ۲۱





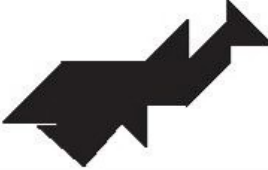

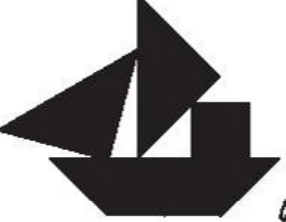






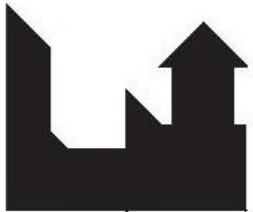


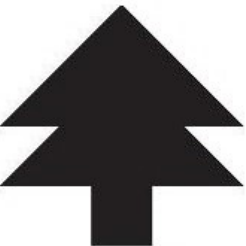




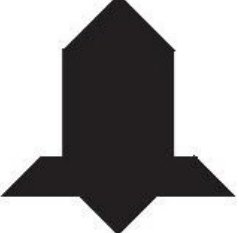



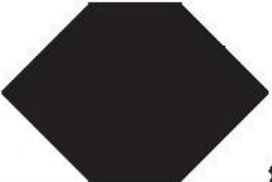
Oval Tangram patterns

الگوهای تنگرام بیضی

 <p>۷۶</p>	 <p>۷۵</p>	 <p>۷۴</p>	 <p>۷۳</p>
 <p>۸۰</p>	 <p>۷۹</p>	 <p>۷۸</p>	 <p>۷۷</p>
 <p>۸۴</p>	 <p>۸۳</p>	 <p>۸۲</p>	 <p>۸۱</p>
 <p>۸۸</p>	 <p>۸۷</p>	 <p>۸۶</p>	 <p>۸۵</p>
 <p>۹۲</p>	 <p>۹۱</p>	 <p>۹۰</p>	 <p>۸۹</p>
 <p>۹۶</p>	 <p>۹۵</p>	 <p>۹۴</p>	 <p>۹۳</p>



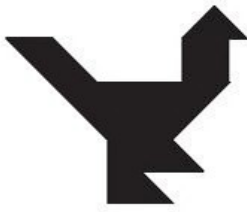

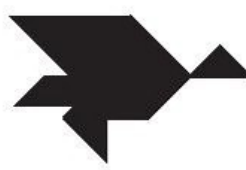





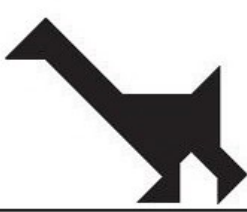
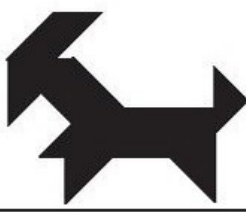






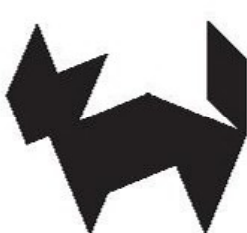
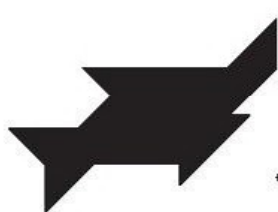



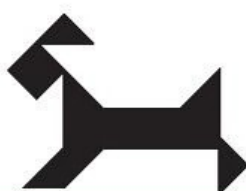




 ۵۲	 ۵۱	 ۵۰	 ۴۹
 ۵۶	 ۵۵	 ۵۴	 ۵۳
 ۶۰	 ۵۹	 ۵۸	 ۵۷
 ۶۴	 ۶۳	 ۶۲	 ۶۱
 ۶۸	 ۶۷	 ۶۶	 ۶۵
 ۷۲	 ۷۱	 ۷۰	 ۶۹











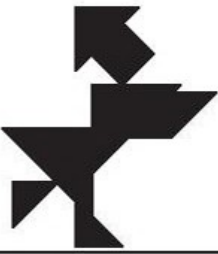
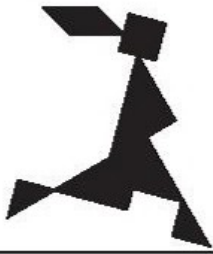












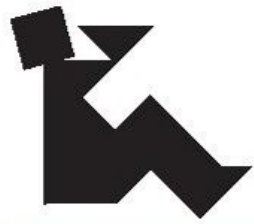

Square Tangram patterns

الگوهای تنگرام مربع

 ۲۸	 ۲۷	 ۲۶	 ۲۵
 ۲۲	 ۳۱	 ۳۰	 ۲۹
 ۳۶	 ۳۵	 ۳۴	 ۳۳
 ۴۰	 ۳۹	 ۳۸	 ۳۷
 ۴۴	 ۴۳	 ۴۲	 ۴۱
 ۴۸	 ۴۷	 ۴۶	 ۴۵





 ۴	 ۳	 ۲	 ۱
 ۸	 ۷	 ۶	 ۵
 ۱۲	 ۱۱	 ۱۰	 ۹
 ۱۶	 ۱۵	 ۱۴	 ۱۳
 ۲۰	 ۱۹	 ۱۸	 ۱۷
 ۲۴	 ۲۳	 ۲۲	 ۲۱