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<!DOCTYPE html>
<html xml:lang="ru" lang="ru">
<title >Переходы и геометрические преобразования</title>
<style>
.frame {
  margin:    3em auto 3em auto;
  border:    thick solid silver;
}
.exbox .center,
.excube .center {
  margin:    0;
  position:  absolute;
  left:      50%;
  top:       50%;
  transform:  translate(-50%, -50%);
}
.exbox {
  font-size: 60pt;
  margin:    .6em auto .6em auto;
  width:     3em;    /* thus 180pt */
  height:    3em;
  color:     white;
  background: #007;
  position:  relative;
}
.excube {
  width:     180pt;
  height:    180pt;
  margin:    auto;
}
.excube .exbox {
  opacity:   .75;
  backface-visibility: visible;
}
.excube > .exbox {
  position:  absolute;
  margin:    0;
  border:    none;
}
.excube > :nth-child(1) {
}
.excube > :nth-child(2) {
  transform:  translate3d(+90pt, 0, -90pt) rotateY(-90deg);
}
.excube > :nth-child(3) {
  transform:  translate3d(0,    0, -180pt) rotateY(-180deg);
}
.excube > :nth-child(4) {
  transform:  translate3d(-90pt, 0, -90pt) rotateY(-270deg);
}
.expers {
  perspective: 360pt;
  perspective-origin: center;
}
.exspin {
  transform:  rotate(-5deg);
  transition: transform .2s ease-in .07s;
}
.exspin:hover {
  transform:  rotate(-30deg);
}

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}
.exspin3d {
  transform: rotate3d(0, .707, .707, 31deg);
  transition: transform .3s linear;
}
.exspin3d:hover {
  transform: rotate3d(0, 1, 0, 13deg);
}
</style>

<section>
<header>
<h1 >Переходы и геометрические преобразования</h1>
</header>

<section class="expers">
<header>
<h2 >Двумерные и трехмерные преобразования</h2>
</header>

<div class="ebox exspin frame" ><p class="center" >☐</p></div>
<div class="ebox exspin3d frame" ><p class="center" >☐</p></div>
</section>

<section>
<header>
<h2 >Грани куба</h2>
</header>

<div class="excube expers">
<div class="ebox frame" ><p class="center" > $\alpha$ </p></div>
<div class="ebox frame" ><p class="center" > $\beta$ </p></div>
<div class="ebox frame" ><p class="center" > $\gamma$ </p></div>
<div class="ebox frame" ><p class="center" > $\delta$ </p></div>
</div>

</section>

</section>

```