

$$\frac{8}{3-\sqrt{5}} = \frac{8 \cdot (3+\sqrt{5})}{(3-\sqrt{5})(3+\sqrt{5})} = \frac{24+8 \cdot \sqrt{5}}{9-5} = \frac{24+8 \cdot \sqrt{5}}{4} = 6+2 \cdot \sqrt{5}.$$