

NAME: _____

P.I. A2.N.5: Rationalize a denominator containing a radical expression

Rationalize the denominator.

1. $\frac{11}{\sqrt{13}}$

[A] $11\sqrt{13}$

[B] $\frac{11\sqrt{13}}{13}$

[C] $\frac{11\sqrt{13}}{169}$

[D] $\frac{\sqrt{11}}{13}$

2. $\frac{2}{\sqrt{3}}$

[A] $2\sqrt{3}$

[B] $\frac{2\sqrt{3}}{3}$

[C] $\frac{\sqrt{2}}{3}$

[D] $\frac{2\sqrt{3}}{9}$

3. $\frac{14}{\sqrt{5}}$

[A] $\frac{\sqrt{14}}{5}$

[B] $\frac{14\sqrt{5}}{25}$

[C] $14\sqrt{5}$

[D] $\frac{14\sqrt{5}}{5}$

Simplify.

4. $\frac{6}{6 - \sqrt{6}}$

[A] $\frac{6 + \sqrt{6}}{5}$

[B] $\frac{36 + \sqrt{6}}{30}$

[C] $\frac{6}{7}$

[D] $\frac{6\sqrt{6}}{6\sqrt{6} - 6}$

5. $\frac{6}{6 - \sqrt{5}}$

[A] $\frac{36 + \sqrt{5}}{31}$

[B] $\frac{36}{41}$

[C] $\frac{6\sqrt{5}}{6\sqrt{5} - 5}$

[D] $\frac{36 + 6\sqrt{5}}{31}$

6. $\frac{8}{2 - \sqrt{6}}$

[A] $-(8 + 4\sqrt{6})$

[B] $\frac{8\sqrt{6}}{2\sqrt{6} - 6}$

[C] $-\frac{16 + \sqrt{6}}{2}$

[D] $\frac{32}{5}$

7. $\frac{9}{3 - \sqrt{3}}$

[A] $\frac{9\sqrt{3}}{3\sqrt{3} - 3}$

[B] $\frac{9 + 3\sqrt{3}}{2}$

[C] $\frac{27 + \sqrt{3}}{6}$

[D] $\frac{27}{4}$

Simplify:

8. $\frac{4 + 2\sqrt{3}}{2\sqrt{3} - 4}$

9. $\frac{1 + 2\sqrt{2}}{2\sqrt{2} - 3}$

10. $\frac{3 + 4\sqrt{2}}{2\sqrt{2} - 3}$

[1] B

[2] B

[3] D

[4] A

[5] D

[6] A

[7] B

[8] $-7-4\sqrt{3}$

[9] $-11-8\sqrt{2}$

[10] $-25-18\sqrt{2}$