

5.6 A review of the Three Proof Techniques

Read Figure 5.2 in p.88.

	Direct	Contrapositive	Contradiction
Start	Hypothesis is true	Conclusion is false	Hypothesis is true and Conclusion is false
Goal	Conclusion is true	Hypothesis is false	Some contradiction

R5.7 \Rightarrow Ex5.16 Prove that if n is an odd integer $\Rightarrow 7n - 5$ is even by (a) a direct proof, (b) a proof by contrapositive, and (c) a proof by contradiction.

(Pf):

(5.6 cont.)

R5.8 \Rightarrow Ex5.17 Let $x > 0$. Prove that if $x - \frac{2}{x} > 1 \implies x > 2$ by (a) a direct proof, (b) a proof by contrapositive, and (c) a proof by contradiction.

(Pf):