

Direct Notes & Key Answers

1. **(a)** Irrational; $\sqrt{2}$ is irrational. **(b)** Rational; simplifies

2. $\sqrt{20} + \sqrt{45} - \sqrt{80} = \sqrt{5}$

3. $(3 + \sqrt{3})(2 + \sqrt{2}) = 6 + 3\sqrt{2} + 2\sqrt{3} + \sqrt{6}$

4. $(81/4) \times (25/72) = 225/32$

5. **(a)** $x + 1 = 3 + \sqrt{3}$ **(b)** $x^2 + 5 = 12 + 4\sqrt{3}$

6. $335 + 0.73 = 33573/100$

7. $a = 2, b = 1$