

3. $-3\sqrt{2}$ root for $p(x)$
 means $P(-3\sqrt{2}) = 0$
 $(-3\sqrt{2})^2 + a\sqrt{2}(-3\sqrt{2}) + 12 = 0$
 $18 + (-3a \times 2) + 12 = 0$
 $\therefore 30 - 6a = 0$
 $-6a = -30$
 $(-a = -\frac{30}{6})(-)$
 $a = 5$ ✓

(A)

(C)

$\sqrt{x} > 0$
 x is
 positive

4. $\sqrt{x-8} + 7 = 8$
 $(\sqrt{x-8} = 1)^2$
 $x-8 = 1$
 $\sqrt{x} = \sqrt{9}$
 $x = 9$ ✓

(C)

5. Let the original price be x & new price y and decrease be d .

$y = ax$
 $280 = \left(\frac{100-d}{100}\right) 350$ ✓

$\frac{100-d}{100} = \frac{280}{350}$

$\frac{100-d}{100} = \frac{4}{5}$

$500 - 5d = 400$

$(-5d = -100)(-)$

$d = 20$ ✓

% of reduction = 20% ✓

(D)