

Answer Key

Testname: VARIATION TEST-1

- 1) (8, -1)
- 2) (-4, 1)
- 3) $y = (x - 4)^2 + 7$
- 4) $y = (x + 2)^2 + 3$
- 5) $x = -7$
- 6) $x = -5$
- 7) $P(x) = x^2 + 10x + 20$
- 8) $R(x) = -500x^2 + 2000x + 70,000$
- 9) 21 s
- 10) $t = \frac{k}{r}$
- 11) $h = \frac{k}{b}$
- 12) Power is $\frac{2}{5}$; constant of variation is 2
- 13) $c = kw$
- 14) $S = kr^2$
- 15) The centripetal force of an object varies directly with its velocity and the square of its mass and inversely with the radius of the circle it moves along.
- 16) Simple interest is directly proportional to the principal, rate of interest, and time.
- 17) 36.45 feet
- 18) $\frac{3}{16}$ foot-candle
- 19) 0.75 sec
- 20) The weight is divided by 16.
- 21) $-\infty, \infty$
- 22) $-\infty, -\infty$
- 23) 0, 7, and -7
- 24) 0, -1, and 5
- 25) -4, multiplicity 3; 0, multiplicity 2; 9, multiplicity 1
- 26) -8, multiplicity 2; 8, multiplicity 3
- 27) Yes
- 28) Yes