# Changing the Subject of a Formula - 3

## Change the subject of each formula to $x$:

**1.** $y = x^2 + 1$ **2.** $y = x^2 - 4$ **3.** $y = x^2 + a$

**4.** $y = x^2 - k$ **5.** $y = x^2 + c$ **6.** $y = x^2 - p$

**7.** $y = 3x^2$ **8.** $y = 5x^2$ **9.** $y = ax^2$

**10.** $y = \frac{x^2}{6}$ **11.** $y = \frac{x^2}{c}$ **12.** $y = \frac{x^2}{m}$

**13.** $y = x^2 + e$ **14.** $y = px^2$ **15.** $y = x^2 - c$

**16.** $y = \frac{x^2}{f}$ **17.** $y = x^2 + t$ **18.** $y = kx^2$

## Change the subject of each formula to the letter in brackets:

**19.** $d = 5t^2 \quad (t)$ **20.** $A = \pi r^2 \quad (r)$ **21.** $V = x^2 h \quad (x)$

**22.** $C = Id^2 \quad (d)$ **23.** $S = 4\pi r^2 \quad (r)$ **24.** $L = 4T^2 \quad (T)$

**25.** $y = 4x^2 + 1 \quad (x)$ **26.** $y = 3x^2 - 5 \quad (x)$ **27.** $y = 2x^2 + 3 \quad (x)$

**28.** $y = 5x^2 - 1 \quad (x)$ **29.** $y = ax^2 + b \quad (x)$ **30.** $y = kx^2 - c \quad (x)$

**31.** $y = px^2 + q \quad (x)$ **32.** $d = kt^2 + a \quad (t)$ **33.** $h = af^2 - m \quad (f)$

**34.** $y = \frac{x^2 + 1}{3} \quad (x)$ **35.** $y = \frac{x^2 - 1}{2} \quad (x)$ **36.** $p = \frac{t^2 + a}{m} \quad (t)$

**37.** $A = \frac{\pi r^2}{2} \quad (r)$ **38.** $d = \frac{gt^2}{2} \quad (t)$ **39.** $V = \frac{\pi r^2 h}{3} \quad (r)$

# Answers

**1.** $x = \sqrt{y-1}$ **2.** $x = \sqrt{y+4}$ **3.** $x = \sqrt{y-a}$

**4.** $x = \sqrt{y+k}$ **5.** $x = \sqrt{y-c}$ **6.** $x = \sqrt{y+p}$

**7.** $x = \sqrt{\frac{y}{3}}$ **8.** $x = \sqrt{\frac{y}{5}}$ **9.** $x = \sqrt{\frac{y}{a}}$

**10.** $x = \sqrt{6y}$ **11.** $x = \sqrt{cy}$ **12.** $x = \sqrt{my}$

**13.** $x = \sqrt{y-e}$ **14.** $x = \sqrt{\frac{y}{p}}$ **15.** $x = \sqrt{y+c}$

**16.** $x = \sqrt{fy}$ **17.** $x = \sqrt{y-t}$ **18.** $x = \sqrt{\frac{y}{k}}$

**19.** $t = \sqrt{\frac{d}{5}}$ **20.** $r = \sqrt{\frac{A}{\pi}}$ **21.** $x = \sqrt{\frac{V}{h}}$

**22.** $d = \sqrt{\frac{C}{I}}$ **23.** $r = \sqrt{\frac{S}{4\pi}}$ **24.** $T = \sqrt{\frac{L}{4}}$

**25.** $x = \sqrt{\frac{y-1}{4}}$ **26.** $x = \sqrt{\frac{y+5}{3}}$ **27.** $x = \sqrt{\frac{y-3}{2}}$

**28.** $x = \sqrt{\frac{y+1}{5}}$ **29.** $x = \sqrt{\frac{y-b}{a}}$ **30.** $x = \sqrt{\frac{y+c}{k}}$

**31.** $x = \sqrt{\frac{y-q}{p}}$ **32.** $t = \sqrt{\frac{d-a}{k}}$ **33.** $f = \sqrt{\frac{h+m}{a}}$

**34.** $x = \sqrt{3y-1}$ **35.** $x = \sqrt{2y+1}$ **36.** $t = \sqrt{mp-a}$

**37.** $r = \sqrt{\frac{2A}{\pi}}$ **38.** $t = \sqrt{\frac{2d}{g}}$ **39.** $r = \sqrt{\frac{3V}{\pi h}}$