重点：T-test步骤

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※※步骤：

判断样本是否正态
(shapiro.test)

- 是 ⇒ (H0：方差相等) var.test看方差是否齐性
  - 齐 → var.equal = T
  - 不齐 → var.equal = F

  若结果为H0成立，则考虑power，排除假阴性。
- 否 ⇒ wilcox.test( )
  - 若报错，则设置 exact = F

※ 若为paired
则判断 difference是否正态

power.t.test (n, delta, sd, sig.level, power, type, alternative)
(知四推一)
① ② ③ ④ ⑤

- n：样本大小
- delta：true difference in means
- sig.level = significance level (0.05)
- power = 1 - Type II error (0.8)
- type ⇒ two.sample / one.sample / paired
- alternative ⇒ two.sided / one.sided

※ 正态检验：
shapiro.test (data)
H0 ⇒ data is normally distributed.

※ 回归线：
- plot (x, y)
- abline (lm(y~x)) ※

※ wilcox.test 与 t.test 参数必设※

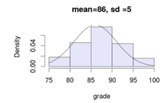
- paired = ~
- alternative = "two.sided" / "greater" / "less"
- mu = ~ (True mean in one sample test)

t.test (y~x ····) x：二分类变量

Assumptions required for using the *t*-statistic

1. Data is continuous and randomly-selected.
   → see lecture on sampling

2. The sample is normally distributed.
   → see lecture on sampling distributions



3. The mean and standard error are independent.
   → nearly always true, but could test by simulation.