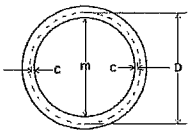
Brake Drums #2 Quiz

Name KEY



m + 2c < D

1. The maximum diameter of a brake drum is listed as 10.065 inches. The drum measures 10.021 inches. What size cut can be made before the drum must be discarded?

m = 10.021 in
c = ?
D = 10.065 in

$m + 2c < D$

$10.021 + 2c < 10.065$

$-10.021 \quad -10.021$

$2c < 0.044$

$\frac{2c}{2} < \frac{0.044}{2}$

$c < 0.022$

cut must be smaller than 0.022 inch

2. The maximum diameter of a brake drum is 11.100 inches. The drum measures 11.050 inches. After machining .024 inch cut from the drum to remove score marks, you must determine if the drum is still usable. Can it be reused?

m = 11.050 in
c = 0.024 in
D = 11.100 in

$m + 2c < D$

$11.050 + 2(0.024) < 11.100$

$11.050 + 0.048 < 11.100$

$11.098 < 11.100$

True - can be reused

3. The maximum diameter of a brake drum is listed 12.050 inches. The drum measures 12.024 inches. What size cut can be made before the drum must be discarded?

m = 12.024 in
c = ?
D = 12.050 in

$m + 2c < D$

$12.024 + 2c < 12.050$

$-12.024 \quad -12.024$

$2c < 0.026$

$\frac{2c}{2} < \frac{0.026}{2}$

$c < 0.013$ cut must be less than 0.013in

4. The maximum diameter of a brake drum is 11.080 inches. The drum measures 11.028 inches. After machining .031 inch cut from the drum to remove score marks, you must determine if the drum is still usable. Can it be reused?

m = 11.028 in
c = 0.031 in
D = 11.080 in

$m + 2c < D$

$11.028 + 2(0.031) < 11.080$

$11.028 + 0.062 < 11.080$

$11.090 < 11.080$

False - cannot be reused

5. Is x, y) =(7, 10) a solution to the inequality? True or False?

$4x + 20y > 230$

$4(7) + 20(10) > 230$

$28 + 200 > 230$

$228 > 230$ False

6. Solve for x: $2x - 10 > 56$

$2x - 10 > 56$

$+10 \quad +10$

$\frac{2x}{2} > \frac{66}{2}$

$x > 33$