

discuss in section 1

how to compare

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①
(absolute:)

two numbers
A and B
①

$(B - A)$ or $(A - B)$

↑
diffe
1985

↑
u.s. cancer total
deaths
in 1970

$(462,000 - 331,000) = +131,000$

there were 131,000 more deaths
in U.S. from cancer in 1985
than in 1970

$(331,000 - 462,000) = -131,000$

there were 131,000 fewer U.S. ⁷ (2)
 cancer deaths in 1970 than in
 1985

(2) (relative:)

$$100 \left(\frac{B - A}{A} \right) \%$$

B is $100 \left(\frac{B - A}{A} \right) \%$

bigger [⊕] or smaller [⊖]

than A

3 sig. fig. ↓

$$100 \left(\frac{462,000 - 331,000}{331,000} \right) \%$$

$$= 100 \left(\frac{+131,000}{331,000} \right) \%$$

$$= 100 (0.39577039) \%$$

8 significant figures (sig figs)

is approximately equal to

$$\approx 39.6\% \approx 40\%$$

The number of U.S. cancer

deaths in 1985 was

about 40% bigger

than (the corresponding number) in 1970

$$100 \left(\frac{A - B}{B} \right) \% \leftrightarrow A \text{ is } 100 \frac{(A - B)}{B} \% \text{ bigger or smaller than } B$$

$$100 \left(\frac{331,000 - 462,000}{462,000} \right) \% =$$

$$100 \left(\frac{-131,000}{462,000} \right) \% = -28.4\% \approx -28\%$$

The number of U.S. cancer deaths, ⁽⁴⁾
in 1970 was about 28% smaller
than (the corresponding number) in
1985

Q: Why was the 1985

bigger?

A₁: Maybe we got
better at correctly

attributing cancer as cause
of death

A₂: total U.S. population

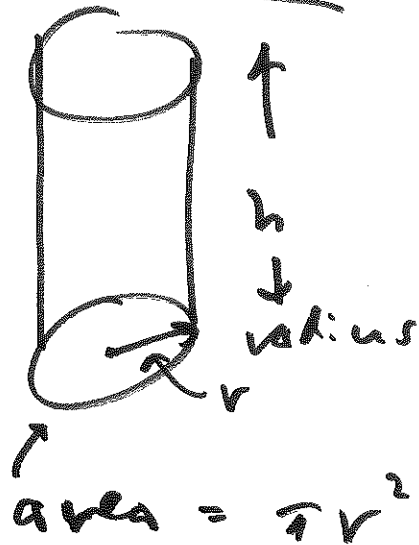
grew from 1970 to 1980,

although probably not be
28-40%.

1
better: 5-year survival rate (5)
from diagnosis

1 (b)

→ Volume of cylinder = $\pi r^2 h$



cone = $\frac{1}{3} \pi r^2 h$

→ radius → or diameter
at base

→ height