

Answers must be clearly **legible**, **simplified** and **boxed** or **circled**. Unless otherwise stated write answer as an **exact** integer or rational or use **two** decimal accuracy. **Units** required.

- 1) Find the area of a 32' 8" × 42' 7" rectangle and give your answer in **sq-ft**.

- 2) Convert 4.5×10^3 cfs to gpm.

- 3) A conveyor belt delivers 48 T of gravel in 18 min. How much gravel will it deliver in 1 hr?

- 4) It takes Joe 1 hr 10 min to clear a 28' × 40' parking area of snow. How long should it take him to clear a 20' × 30' parking area of snow?

- 5) Bend's population grew by 16% from 1995 to 1998. If the population was 48,760 in 1995, what was the population in 1998?

- 6) From 2000 to 2005 passengers at the Bend-Redmond airport increased by 1,932 which was also an 18% increase. How many passengers boarded in 2000?

- 7) An old tachometer reads 3850rpm when it should read 4000 rpm.
- (a) What is the **absolute error** of the tachometer?
- (b) What is the **relative error** of the tachometer?
- (c) What **reading** might one expect when actually turning at 5000 rpm?
- 8) A certified 50 lb weight gives a reading of 53.2 lbs on an old Brand X scale.
- (a) What is the **absolute error** of the scale?
- (b) What is the **relative error** of the scale?
- 9) If the above scale were used to weigh a 230# crate what weight would you expect it to display?
- 10) A formula for an IV drug is $Q = \frac{\text{Body weight in lbs}}{100} \times 1.7 \text{ cc}$. A doctor **guesses** 180# for a patient who actually weighs 173#.
- (a) What is the **relative error** in the **weight**?
- (b) What is the **absolute error** in the **IV** calculation?

BONUS

A pocket data recorder manufacturer certifies their product will record decibels within $\pm 8.5\%$ relative error. What **absolute error** is possible when recording a 160 decibel jet engine?