

APPC

Quiz Zero

Answer the following. Show any work.

1. If you want chopped apple for a salad, about how much more apple will you get from an apple with a four centimeter diameter than from an apple with a two centimeter diameter?
a) twice, b) four times, c) six times, d) eight times, e) sixteen times.

2. Find A in the equation $F = MA$.
3. Find R if $R_1 = 25$, $R_2 = 75$, and $R_3 = 100$. Use the formula:

$$\frac{1}{R} = \frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3}$$

4. What is the center to center distance between your eyes?
a) 1 cm, b) 65 mm, c) 140 mm, d) 2.5 cm, e) $1.5 \times 1/100$ m
5. A friend is riding past you on a bike. A book falls off the pack rack. Draw a diagram and describe in words the path of the book as it falls. What forces are acting on the book as it falls?
6. What is the phase of the moon during a total eclipse of the sun? Illustrate with a diagram.
7. Sketch a graph of the sine of an angle versus the angle as the angle changes from 0 to 360 degrees.
8. In the following equation:

$$V_{average} = \frac{V_{initial} + V_{final}}{2}$$

when $v_i = 3.22$ m/sec, and $v_f = 6.55$ m/sec, what is v_{av} ?

- a) 4.89 m/sec, b) 4 m/sec, c) 5 m/sec, d) 4.88 m/sec, e) 4.885 m/sec?

Bonus: Which is heavier, a full cup of water with a piece of wood floating in it, or a full cup of water without the wood?