

Name: \_\_\_\_\_ Date: \_\_\_\_\_

AMDM: Unit 1 Review Guide Spring '15

1) Round everything to 3 decimal places

|                    | P285/60R15  | P310/75R15  |
|--------------------|---|---|
| WIDTH (mm)         | 285 mm  | 310 mm  |
| ASPECT RATIO %     | 60%   | 75%   |
| HEIGHT (in)        | $(60)285 = 171 \text{ mm} \div 25.4 = 6.732 \text{ in}$ | $(75)310 = 232.5 \text{ mm} \div 25.4 = 9.154 \text{ in}$ |
| DIAMETER (in)      | $6.732 + 15 + 6.732 = 28.464 \text{ in}$                | $9.154 + 15 + 9.154 = 33.308 \text{ in}$                  |
| CIRCUMFERENCE (in) | $28.464 \pi = 89.422 \text{ in}$                        | $33.308 \pi = 104.640 \text{ in}$                         |

How much further has the second tire traveled in comparison to the first tire?

$$\frac{104.640}{89.422} = 1.170$$

If your speedometer says you are travelling at 60 mph how fast are you actually travelling?

$$60 \times 1.170 = 70.2 \text{ mph}$$

2) Round everything to 2 decimal places

| Grading System 1       |           | Grading System 2       |           |
|------------------------|-----------|------------------------|-----------|
| Test average - 40%     | 82 = 32.8 | Test average - 30%     | 82 = 24.6 |
| Final exam grade - 10% | 75 = 7.5  | Final exam grade - 20% | 75 = 15   |
| Homework - 10%         | 80 = 8    | Homework - 25%         | 80 = 20   |
| Projects - 40%         | 90 = 36   | Projects - 25%         | 90 = 22.5 |

You have a 82% test average, a 75% on your final exam, an 80% homework average and a 90% project average

What is your class average under each system? Which system do you prefer?

GS1: 84.3%

GS2: 82.1%

Grading System 1 gives a higher average

You are at the end of the semester and you want to know what you need to get on the final exam to get an A (90%) You have a 88% test average, a 93% homework average and a 90% project average. What do you need to get on the final in each grading system? GIVE EXACT ANSWERS

ANSWERS GS1  $(40)88 = 35.2$

$$90 - 80.5 = 9.5$$

$$(60)x = 9.5$$

$$\frac{9.5}{60} = x$$

$$x = 0.1583$$

$$x = 15.83\%$$

GS2  $(30)88 = 26.4$

$$90 - 72.15 = 17.85$$

$$(20)x = 17.85$$

$$\frac{17.85}{20} = x$$

$$x = 0.8925$$

$$x = 89.25\%$$

3) How many ways can you create a 7 digit code if no number can be repeated?

$$\frac{10}{1^{\text{st}}} \cdot \frac{9}{2^{\text{nd}}} \cdot \frac{8}{3^{\text{rd}}} \cdot \frac{7}{4^{\text{th}}} \cdot \frac{6}{5^{\text{th}}} \cdot \frac{5}{6^{\text{th}}} \cdot \frac{4}{7^{\text{th}}} = 604,800 \text{ ways}$$

SALTBUB

WORDS

4) The Cobb County School District recognizes that the dress and grooming of students both individually and collectively are significant factors in the successful operation of our educational program. We believe that one of the educational responsibilities of the school is to help make students aware that appropriate appearance and hygiene are conducive to the well-being of themselves and others. Each student will be expected to maintain a standard of dress and grooming that is consistent with the level of formality of the school situation. We seek the assistance of parents in monitoring their child's clothing to ensure that it is appropriate to the classroom. Clothing which is distracting, disruptive, or creates an unsafe situation may not be worn to school. If a student is not appropriately dressed, a parent may be contacted. The dress code applies to all school functions.

140

Find the readability of the above using the FI or the FKGLI.

# OF WORDS: 140

$$FI = .4 \left( \frac{140}{7} + 100 \left( \frac{21}{140} \right) \right) = 14$$

# OF SYLLABLES: 240

# OF COMPLEX WORDS: 21

$$FKGLI = .39 \left( \frac{140}{7} \right) + 11.8 \left( \frac{240}{140} \right) - 15.59 = 12.44$$

# OF SENTENCES: 7

5) Show that the if the following is a invalid UPC number 7-61941-30646-4

$$21 + 6 + 3 + 9 + 12 + 1 + 9 + 0 + 18 + 4 + 18 = 105 \text{ NOT VALID!}$$

Change it so it is a valid number (indicate how you changed it to make it valid)

CHANGE CHECK DIGIT OF 4 TO 9

$$21 + 6 + 3 + 9 + 12 + 1 + 9 + 0 + 18 + 4 + 18 + 9 = 110$$

SINCE 105 IS 5 AWAY FROM THE NEXT # ENDING IN 0 ADD 5 TO THE CURRENT CHECK DIGIT

VALID!

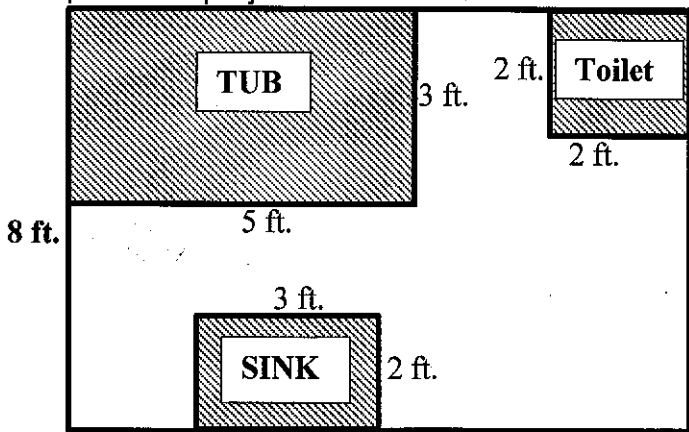
Given the following code, determine the check digit. 06530045296d

$$0 + 6 + 15 + 3 + 0 + 0 + 12 + 5 + 6 + 9 + 18 + d$$

$$74 + d$$

$$d = 6$$

6) You are re-tiling a bathroom. Below is a diagram of the bathroom. You are only tiling the floor (obviously) so make sure to account for no tiles needed to the tub, toilet and sink. You are using decorative tile and you determined that 14 pieces of tile fit into 1ft<sup>2</sup>. How much tile will you need to complete this project? 10 ft.



$$\text{Bathroom} = 10\text{ft} \times 8\text{ft} = 80\text{ft}^2$$

$$\text{TOILET} = 2\text{ft} \times 2\text{ft} = 4\text{ft}^2$$

$$\text{TUB} = 5\text{ft} \times 3\text{ft} = 15\text{ft}^2$$

$$\text{SINK} = 3\text{ft} \times 2\text{ft} = 6\text{ft}^2$$

$$80 - 4 - 15 - 6 = 55\text{ft}^2$$

OF ACTUAL FLOOR TO BE TILED

THERE ARE 14 PIECES OF TILE FOR EVERY FT<sup>2</sup>  
 SO  $55\text{ft}^2 \times 14 = 770$  PIECES OF TILE