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Math: Watch It Work

I use many things that I have learned in this semester’s math course in my everyday life. From addition to subtraction, from multiplication to division, and from ratios to proportions, I pretty much use all of these skills throughout my work tour. Even if I don’t put these skills into practice myself, I witness them being used.

Addition and subtraction are simple mathematical operations, yet they are pertinent in the lives of nurses. During my typical day of work, I check countless blood pressures. The instruments I use to check blood pressures with are called a sphygmomanometer and a stethoscope. The sphygmomanometer has both large and small lines. Each large line represents ten millimeters of mercury, while the smaller lines each represent two millimeters of mercury. When I check a blood pressure, I have to use addition to figure out exactly what a blood pressure measures by counting up the smaller lines and adding them to the values obtained with the bigger lines. Also, I am responsible for checking Dr.’s orders on a daily. If a Dr. orders six-hundred milligrams of a pill every six hours, and I have only three-hundred milligram tablets of that medicine available, then I know to give my patient two tablets every six hours. This is simple math put into practice in a very critical way.

Likewise, I apply multiplication, division, and use of order of operations several times during my shift. For example, a very easy way to measure one’s heart rate is by feeling for a pulse on the wrist. I count each time I feel a beat for fifteen complete seconds. Heart rate is calculated in beats per minute, so if I count fifteen beats, I multiply fifteen times four, since I want to acquire the measurements for a full minute. I then know that my patient has a heart rate of sixty beats per minute. Also, there are certain meds in which our Dr. prescribes, whose dosage is dependent on the patient’s weight. I have to calculate the patient’s BMI, or body mass index, to determine an effective dosage that is still safe for the patient to take. BMI is equal to weight in pounds divided by height in square inches times seven-hundred, three. If a patient weighs one-hundred forty-five pounds, and has a height of five feet, six inches, then I would use the formula BMI=(wt/(ht^2))x703 to calculate their BMI. I would convert their height to inches by multiplying five feet by twelve inches, because there are twelve inches in one foot. I then add to my answer of sixty, the six inches that are left over for a total of sixty-six inches. Plugging these values into the formula, I can compute BMI=(145/(66x66))x703. I know that I have to multiply inside the parentheses first, so, BMI=(145/4356)x703, which equals 23.40.

Our timekeepers use math to compute our pay. We are paid for every one quarter hour that we work. If am scheduled to work a twelve hour tour, but I leave forty-five minutes early, then I get paid for eleven hours and fifteen minutes. I am also deducted fifteen minutes of pay for each seven minutes that I am late for work. Our timekeepers also deduct three fifteen minute breaks and one thirty minute lunch break from my pay for each twelve hour shift I work. I am deducted two fifteen minute breaks and one thirty minute lunch break when I work an eight hour tour. I am paid every two weeks, working six twelve hours tours and one eight hour tour. Therefore, my pay and my leave should reflect whatever time I am here versus whatever time I have used.

To conclude, math is truly part of my everyday life, especially throughout my day at work. Whether I have to apply addition, subtraction, multiplication, division, formulas, powers, or parentheses, I feel even more confident than before, because I am in this semester’s math course.