Math 081, Fall 2019
Final Exam Practice
(Chapter 1-7,9)

Name: _____ **Score:** /300

Show all your work to receive full credit. Scientific calculators are allowed.

Cell phones and graphing calculators are NOT allowed.

Problems 1-5 are worth 6 points each.

1. Write 0.25% as a decimal.

2. Write $\frac{1}{6}$ as a decimal.

3. Evaluate: $-(-1)^{10}$

4. Determine whether 3 is a solution of the equation $5x + 2 = 40$.

5. Simplify the fraction $\frac{-13}{0}$ to its simplest form.

Problems 6-35 are worth 9 points each.

6. In a mathematics class, the following test scores were recorded for a student. Find the mean and median.

$$77, 86, 82, 65, 68, 76$$

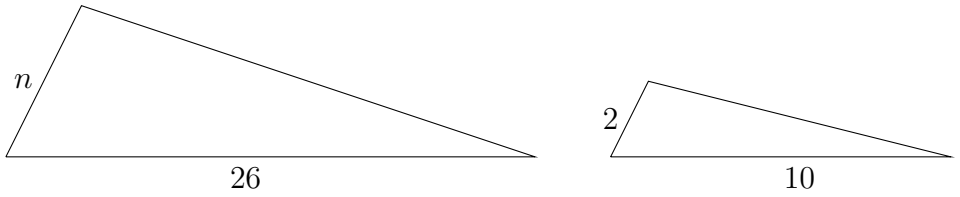
7. Convert 63 inches to ft and inches.

8. Round the fraction $\frac{8}{7}$ to the nearest hundredth.

9. Evaluate $x \div y$ for $x = 456$ and $y = 0$.

10. If Harry earned \$370 in 5 weeks find the unit rate of his earning.

11. Given that the pair of triangles is similar, find the unknown length **n**.



Translate each problem into an equation and solve it:

12. A gold and diamond bracelet sells for \$1200. Find the sales tax and the total price if the sales tax rate is 3.5%.

13. 8.4 is what percent of 20?

14. A money market fund advertises a simple interest rate of 5%. Find the total amount received on an investment of $7000 for 15 months.

15. On a map, 1 inch equals 5 miles. If two cities are 5 inches apart on the map, how far are they actually apart?.

16. The sum of 6, 8, and a number amounts to 21. Find the number.

Evaluate:

17. $3^4 - [38 - (10 - 7)]$.

18. $\frac{3}{14} - \frac{3}{7}$.

19. $\left(-\frac{2}{3}\right)^3 \div 2$.

20. $\frac{(-5)(-4) - (3)(4)}{4[5 \div (4 - 9)]}$.

21. $\frac{(1.2)^2}{1000}$

22. $\sqrt{\frac{25}{64}}$

Perform the operations and simplify:

23. $2(5x + 1) + 6(x - 2)$.

24. $11 + 8r + 5r - 4r - 3$

25. 3.21 m - 122 cm.

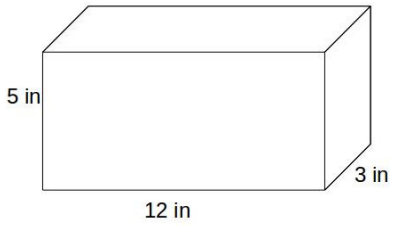
26. 55 kg - 2130 gm.

27. 2.5 mg $\times$ 3

28. 12.5 L $\div$ 5

29. Find the exact area of a circle with a diameter of 18 cm.

30. Find the volume of the box. Include units of measure.



Solve the equations:

31. $-15x - 20 = -14x + 55$.

32. $-28 - (-33) = \dfrac{x}{7}$.

33. $x - \dfrac{1}{20} = \dfrac{9}{10}$.

34. $3.6x + 5 - 1.6x = 9$.

35. $\dfrac{10}{\left(\dfrac{5}{2}\right)} = \dfrac{20}{y}$.

EXTRA CREDIT. Each problem is worth 5 points.

1. Solve for k: $\dfrac{k}{4} = \dfrac{k}{12} + \dfrac{6}{3}$

2. A video game system and several games are sold for $696. The cost of the games is 3 times as much as the cost of the system. Find the cost of the system and the cost of the games.

3. Find the GPA for the student with the following grades in 4 courses:

Grade	Credit hours
B	2
C	2
A	2
C	3

4. A salesman paid $35 to fill his car with 15 liters of gasoline. Find the price per liter of gasoline.

Answer key

1. .0025
2. $.1\overline{6}$
3. –1
4. *no*
5. Undefined
6. Median 76.5 Mean $75.\overline{6}$
7. 5 ft 3 in
8. 1.14
9. Undefined
10. $75 per week
11. 5.2
12. Sales tax $42, total price $1242
13. 42
14. $7437.50
15. 25 miles
16. 7
17. 46
18. $-\frac{3}{14}$
19. $-\frac{4}{27}$
20. –2
21. $.00144\ or\ \frac{9}{6250}$
22. $\frac{5}{8}$
23. $6x - 10$
24. $9r + 8$
25. 199cm
26. 52.87kg
27. 7.5mg
28. 2.5L
29. $81\pi cm^2$
30. $180in^3$
31. –75
32. 35
33. $\frac{19}{20}$
34. 2
35. 5

EC 1. 12

EC 2. system costs $174, games cost $522

EC 3. $2.\overline{6}$

EC 4. $2.33