

MATH 105 – Contemporary Mathematics (Bachelor of Nursing, Year 1) – Complete Practice Questions with Answers (Healthcare Applications).

Topic 1: Basic Calculations & Fractions

1. A patient is prescribed $\frac{1}{2}$ tablet of a medication. If the tablet is 50 mg, what dose is the patient receiving?

a) 100 mg
b) 25 mg
c) 50 mg
d) 12.5 mg

Answer: b) 25 mg

2. You need to administer $\frac{3}{4}$ of a 40 mg tablet. How many mg will you give?

a) 30 mg
b) 10 mg
c) 20 mg
d) 15 mg

Answer: a) 30 mg

3. Convert 0.125 to a fraction in its simplest form.

a) $\frac{125}{1000}$
b) $\frac{1}{8}$
c) $\frac{1}{80}$
d) $\frac{5}{40}$

Answer: b) $\frac{1}{8}$

4. Convert the fraction $\frac{5}{8}$ to a decimal.

a) 0.58
b) 0.625
c) 0.85
d) 1.6

Answer: b) 0.625

5. Which of the following is the largest value?

a) 0.4
b) $\frac{1}{3}$
c) 0.33
d) $\frac{3}{10}$

Answer: a) 0.4

Topic 2: Decimals & Percentages

6. What is 25% of 80?

- a) 20
- b) 200
- c) 32
- d) 320

Answer: a) 20

7. A patient's weight decreased from 180 lbs to 171 lbs. What is the percent decrease?

- a) 9%
- b) 5%
- c) 10%
- d) 95%

Answer: b) 5%

8. A 50 mL solution contains 5 mL of medication. What percentage of the solution is medication?

- a) 1%
- b) 5%
- c) 10%
- d) 50%

Answer: c) 10%

9. Convert 0.75 to a percentage.

- a) 7.5%
- b) 75%
- c) 0.75%
- d) 750%

Answer: b) 75%

10. Convert 8% to a decimal.

- a) 0.8
- b) 0.08
- c) 0.008
- d) 8.0

Answer: b) 0.08

Topic 3: Metric System & Conversions

11. How many milligrams (mg) are in 2 grams (g)?

- a) 20 mg

- b) 200 mg
- c) 2000 mg
- d) 0.002 mg

Answer: c) 2000 mg

12. How many milliliters (mL) are in 3 liters (L)?

- a) 30 mL
- b) 300 mL
- c) 3000 mL
- d) 0.003 mL

Answer: c) 3000 mL

13. Convert 1500 mL to liters.

- a) 1.5 L
- b) 15 L
- c) 150 L
- d) 0.15 L

Answer: a) 1.5 L

14. A dose is 500 mcg. How many milligrams is this?

- a) 0.5 mg
- b) 5 mg
- c) 50 mg
- d) 5000 mg

Answer: a) 0.5 mg

15. A patient is 165 cm tall. How many meters is this?

- a) 0.165 m
- b) 1.65 m
- c) 16.5 m
- d) 1650 m

Answer: b) 1.65 m

Topic 4: Dosage Calculations (Tablets)

16. A patient is prescribed 750 mg of a drug. The tablets available are 250 mg each. How many tablets should be administered?

- a) 1.5 tablets
- b) 2 tablets
- c) 3 tablets
- d) 4 tablets

Answer: c) 3 tablets

17. The order is for 0.125 mg. The tablets available are 0.25 mg. How many tablets will you give?

- a) 1/4 tablet
- b) 1/2 tablet
- c) 1 tablet
- d) 2 tablets

Answer: b) 1/2 tablet

18. A doctor prescribes 40 mg of furosemide. The stock is 20 mg tablets. How many tablets are needed?

- a) 1 tablet
- b) 1.5 tablets
- c) 2 tablets
- d) 4 tablets

Answer: c) 2 tablets

19. The order is for 100 mg. You have 50 mg tablets. How many tablets do you give?

- a) 0.5 tablet
- b) 1 tablet
- c) 2 tablets
- d) 4 tablets

Answer: c) 2 tablets

20. You need to give 75 mg. The tablets are 25 mg. How many tablets?

- a) 2 tablets
- b) 3 tablets
- c) 4 tablets
- d) 1.5 tablets

Answer: b) 3 tablets

Topic 5: Dosage Calculations (Liquid Solutions)

21. A drug is available as 250 mg/5 mL. You need to give 500 mg. How many mL will you administer?

- a) 2.5 mL
- b) 5 mL
- c) 10 mL
- d) 15 mL

Answer: c) 10 mL