



HEALTH SCIENCES MATH ASSESSMENT SAMPLE

You will have up to 1 hour to complete **35 multiple choice questions**. Basic calculators are allowed (will be provided).

A. Fractions (6 marks)

1. Reduce $\frac{42}{54}$ to lowest terms: _____
2. Find the largest fraction in the following set: $\frac{2}{3}, \frac{3}{4}, \frac{9}{13}, \frac{9}{14}$ _____
3. Add $2\frac{5}{12} + 6\frac{4}{9}$ _____
4. Subtract $4\frac{1}{6} - 2\frac{7}{8}$ _____
5. Multiply $12 \times \frac{3}{4}$ _____
6. Divide $\frac{7}{24} \div 2\frac{5}{8}$ _____

B. Decimals (6 marks)

7. Add $700 + 0.059 + 3.1$ _____
8. Subtract $57.9 - 36.22$ _____
9. Multiply 5.63×0.03 _____
10. Divide $31.52 \div 2.3$ to the nearest whole number _____
11. Write 0.75 as a fraction in lowest terms _____
12. Write $\frac{5}{8}$ as a decimal _____

C. Percents (4 marks)

13. Express 84% as a fraction in lowest terms _____
14. Express $\frac{18}{20}$ as a percent _____
15. What is 75% of 70? _____
16. A bottle contains 300 millilitres of liquid. If 25% of the liquid is removed, how many millilitres remain? _____

D. Algebra (4 marks)

Questions 17 to 20 - Solve for N

17. $N - 17 = 23$ N = _____
18. $2N + 5 = 29$ N = _____
19. $\frac{4}{7} = \frac{N}{42}$ N = _____
20. $\frac{4}{5}N = 16$ N = _____

E. Metric System (6 marks)

21. 0.003 grams = _____ milligrams
22. 2 milligrams = _____ micrograms
23. 4.6 micrograms = _____ milligrams
24. 0.075 kilograms = _____ milligrams
25. 9.52 litres = _____ millilitres
26. Add 2.2 kg + 5.75 g + 300 mg (Give your answer in grams) _____

F. Applications (9 marks)

27. If there are 30 grams in one ounce, how many grams are there in 5.2 ounces? _____
28. If 1 tablespoon = 15 millilitres, how many tablespoons are in 112.5 millilitres? _____
29. If a drug dose for an adult is 23.8 mg/kg, and a child's dose is $\frac{1}{4}$ the adult dose, what is the child's dose in mg/kg?

30. If 13 grams of a drug are dissolved in 100 millilitres of a solution, how many grams are dissolved in 500 millilitres of the solution? _____
31. If a patient is prescribed 15 mg of a drug, what volume of solution will you measure if the drug is available as a 10 mg/mL solution? _____
32. If a drug comes in a solution of 0.125 g/mL, what volume will you measure for a dose of 0.25 g? _____
33. A prescription specifies 1 gram of a drug to be taken twice a day. If the drug is available as 200 milligram tablets, how many tablets will the patient take per day? _____
34. If a drug is available as a solution containing 30 mg/mL, and you are required to measure a dose of 20 mg, what units will you use to express the amount you measure?
mg? mL? mg/mL? mL/mg?
35. In the relationship $\frac{d}{h} \times f = N$, what is N if d= 100, h=5, and f=3? _____

ANSWER KEY FOR HEALTH SCIENCES MATH

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|---------------------|---------------------|------------|---------------|------------|
| 1. $\frac{7}{9}$ | 8. 21.68 | 15. 52.5 | 22. 2000 | 29. 5.95 |
| 2. $\frac{3}{4}$ | 9. 0.1689 | 16. 225 ml | 23. 0.0046 | 30. 65 g |
| 3. $8\frac{31}{36}$ | 10. 14 | 17. 40 | 24. 75,000 | 31. 1.5 mL |
| 4. $1\frac{7}{24}$ | 11. $\frac{3}{4}$ | 18. 12 | 25. 9,520 | 32. 2 mL |
| 5. 9 | 12. 0.625 | 19. 24 | 26. 2206.05 g | 33. 10 |
| 6. $\frac{1}{9}$ | 13. $\frac{21}{25}$ | 20. 20 | 27. 156 g | 34. mL |
| 7. 703.159 | 14. 90% | 21. 3 | 28. 7.5 | 35. 60 |