

Respiratory Therapy Entrance Exam

SAMPLE

The math exam has 34 questions and the essay should be approximately four paragraphs. You have 1½ hours to complete the assignment. You **cannot** use a calculator.

Change to whole numbers or mixed numbers (example $12/6 = 2$)

1) $9/4 = 2 \frac{1}{4}$

2) $16/3 = 5 \frac{1}{3}$

Add the following fractions (example $1/8 + 1/2 + 1/4 = 5/8$)

3) $1/6 + 3/8 + 3/4 = 31/24$ or $1 \frac{7}{24}$

4) $2 \frac{3}{4} + 4 \frac{1}{8} + 5 \frac{1}{2} = 12 \frac{3}{8}$

Subtract the following fractions and mixed numbers (example $2/3 - 1/2 = 1/6$)

5) $4/5 - 1/3 = 7/15$

6) $4 \frac{1}{2} - 2 \frac{1}{4} = 2 \frac{1}{4}$

Write as a decimal (example forty five and five tenths = 45.5)

7) thirty five and three hundredths = 35.03

8) one hundred sixty and three thousandths = 160.003

Add the following decimals (example $0.05 + 0.010 + 0.156 = 0.216$)

9) $1.005 + 20.1 + 400.5 = 421.605$

10) $0.004 + 42.015 + 1004.05 = 1046.069$

Subtract the following decimals (example $12.05 - 10.50 = 1.55$)

11) $125.50 - 100.60 = 24.90$

12) $95.05 - 5.25 = 89.80$

Multiply the following (example $525 \times .51 = 267.75$)

13) $550.10 \times 0.5 = 275.050$

14) $841.08 \times 0.08 = 67.2864$

Divide the following (example $3/5 \div 3/10 = 2$)

15) $4/8 \div 1/16 = 8$

16) $14.25 \div 3.5 = 4.07$

Change the following fractions to decimals (example $7/10 = 0.7$)

17) $5 \frac{1}{4} = 5.25$

18) $10 \frac{2}{3} = 10.67$

Solve the following proportions (example $1:2 :: X:15; X = 7.5$)

19) $30:45::35:X \quad X = 52.5$

20) $3/4 = 1/X \quad X = 1 \frac{1}{3}$

21) $X:60::3:12 \quad X = 15$

Change the following to percents (example $\frac{1}{2} = 50\%$)

22) $0.007 = 0.7\%$

23) $\frac{3}{4} = 75\%$

What is

24) $5\% \text{ of } 75 = 3.75$

25) $0.5\% \text{ of } 500 = 2.5$

Express as a decimal (example $47\% = .47$)

26) $150\% = 1.50$

27) $0.1\% = 0.001$

Express as a percentage (example $0.5 = 50\%$)

28) $0.125 = 12.5\%$

29) $1/50 = 2\%$

Perform the following conversions (example $125 \text{ ml} = 0.125 \text{ L}$)

30) $100 \text{ mg} = 0.1 \text{ g}$

31) $0.4 \text{ L} = 400 \text{ ml}$

33) $2 \text{ mg} = 0.002 \text{ g}$

34) $0.0025 \text{ g} = 2.5 \text{ mg}$

Write an essay addressing the following four issues:
Questions/issues/topics will be given at the time of the exam.