

Math 095 Basic College Math Sample Module Test 1

1) Evaluate using the correct order of operations: $240 \div 4 + 20 - 3^2$

2) Evaluate the given expression: $\frac{\frac{7}{20}}{\frac{19}{30}}$

3) A container that holds 141 cups of lemonade is to be used at a cookout. Each plastic cup holds $3\frac{7}{9}$ cups of punch. How many plastic cups can be filled?

4) Solve for x : $\frac{1}{15} \cdot x = \frac{8}{135}$

5) Change the following improper fraction to a mixed number or whole number: $\frac{221}{18}$

6) Multiply. Change any mixed number to an improper fraction before multiplying: $3\frac{2}{3} \times 1\frac{5}{7}$

7) A small bottle of drops contains 10 milliliters. If the recommended use is $\frac{5}{6}$ milliliter, how many times can a person use the drops before the bottle is empty?

8) David drove to visit his friend. He traveled 111 miles in $3\frac{1}{3}$ hours. What was his average speed?

9) Subtract:

$$\begin{array}{r} 6\frac{3}{18} \\ - 3\frac{7}{9} \\ \hline \end{array}$$

10) Change the following improper fraction to a mixed number or a whole number: $\frac{228}{12}$

11) Bobby rode his mountain bike through part of the Ozark Mountains in Tennessee. On Monday, he rode $25\frac{1}{4}$ miles. On Tuesday, he rode $18\frac{7}{8}$ miles. What was his total biking distance during those two days?

12) Round to the nearest cent: \$34.0771

13) Business people have determined that $\frac{5}{6}$ of the items on a mailing list will change in one year. A business mailing has a list of 5010 people. After one year, how many addresses on that list will be incorrect?

14) Fill in the blank with one of the symbols $<$, $=$, or $>$: 0.13 ___ $\frac{1}{8}$

15) Evaluate: $(0.2)^3 + (5 - 4.7) \times 0.3$

16) The Art Department is hanging banners all over the building to celebrate its senior graduates. The art department is using $113\frac{2}{5}$ yards of starry-sky parachute fabric. Change this number to an improper fraction.

17) Estimate by rounding each number to one nonzero digit first, then perform the actual calculation: A jet fuel tank containing 12,810 gallons is being emptied at a rate of 122 gallons per minute. How many minutes will it take to empty the tank?

18) An ice climber had the local mountaineering shop install boot heaters to the back of his hiking boots. The installer drilled a hole $\frac{7}{8}$ of an inch in diameter. The hole for the boot heater should have been 0.5 inch in diameter. Is the hole too large or too small? By how much?

19) Diane and Nancy are the two tallest basketball players on their team. Diane is $67\frac{1}{2}$ inches tall and Nancy is $72\frac{1}{7}$ inches tall. How many inches taller is Nancy than Diane?

20) Evaluate using the correct order of operations: $3 \times 2 + (12 - 5)^2 - 6 \times 2$

21) Write 23.475 in fractional notation.

22) During the previous baseball season, the winning percentages of two local teams were 0.50065 and 0.58616. Round these values to the nearest thousandth.

23) A used car is listed at a sales price of \$1500. A loan was obtained for $\frac{3}{5}$ of the tuition. How much was the loan?

24) Write 0.0719 in fractional notation.

25) Add:

$$\begin{array}{r} 1\frac{3}{8} \\ 8\frac{5}{7} \\ +19\frac{3}{4} \\ \hline \end{array}$$

26) Garden State Reservation was contaminated by waste from an abandoned oil storage tank. Damage was done to $\frac{335}{23}$ acres of land. Write this as a mixed number.

ANSWERS:

1) 71 2) $\frac{21}{38}$ 3) $\frac{1269}{34}$ 4) $\frac{8}{9}$ 5) $12\frac{5}{18}$ 6) $6\frac{2}{7}$ 7) 12

8) $\frac{333}{10}$ 9) $2\frac{7}{18}$ 10) 19 11) $44\frac{1}{8}$ 12) \$34.08 13) 4175

14) < 15) 0.098 16) $\frac{567}{5}$ 17) Estimate: 100 minutes; Actual: 105 minutes

18) too large; 0.375 inch 19) $4\frac{9}{14}$ 20) 43 21) $23\frac{19}{40}$ 22) 0.501; 0.586

23) 900 24) $\frac{719}{10,000}$ 25) $29\frac{47}{56}$ 26) $14\frac{13}{23}$