

# Module 00102 Exam

## Introduction to Construction Math

Trainee Name: \_\_\_\_\_

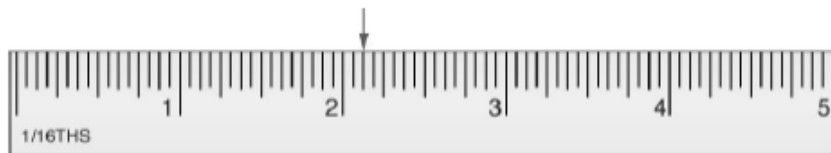
Social Security Number: \_\_\_\_\_ Date: \_\_\_\_\_

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- In the number 123.456, the 5 represents \_\_\_\_\_.
  - 5 thousandths
  - 5 hundredths
  - 5 tenths
  - 5 ones
- Add the following numbers: 811, 901, 88, and 5. The sum is \_\_\_\_\_.
  - 1,705
  - 1,775
  - 1,795
  - 1,805
- A carpenter makes \$24/hour and works a 40 hour week. The employer withholds \$83 federal tax, \$74 FICA, and \$41 state tax. The carpenter's take-home pay is \_\_\_\_\_.
  - \$762
  - \$802
  - \$808
  - \$837
- A package contains 12 locksets. Each of 16 job sites receives a single package. How many locksets are there across the job sites?
  - 28
  - 48
  - 192
  - 256
- A worker must cut 5,814 meters of rope into 27 meter sections. How many 27 meter sections are possible, and how much rope will be left over?
  - 215 sections with 3 meters left over
  - 215 sections with 8 meters left over
  - 215 sections with 9 meters left over
  - 218 sections with 3 meters left over
- An equivalent fraction for  $\frac{5}{16}$  is \_\_\_\_\_.
  - $\frac{5}{32}$
  - $\frac{10}{32}$
  - $\frac{1}{2}$
  - $\frac{10}{16}$

7. When reduced to its lowest terms, the fraction  $12/16$  is \_\_\_\_\_.  
a.  $12/8$   
b.  $3/4$   
c.  $8/12$   
d.  $5/8$
8. The improper fraction  $37/6$  is equal to the mixed number \_\_\_\_\_.  
a.  $5-7/16$   
b.  $6$   
c.  $6-1/6$   
d.  $37$
9.  $1/4 + 3/8$  reduced to the lowest terms = \_\_\_\_\_.  
a.  $4/8$   
b.  $1/2$   
c.  $5/8$   
d.  $5/4$
10.  $8/12 - 4/8$  reduced to the lowest terms = \_\_\_\_\_.  
a.  $2/14$   
b.  $1/7$   
c.  $4/24$   
d.  $1/6$
11.  $7/8 \times 3/9$  reduced to the lowest terms = \_\_\_\_\_.  
a.  $21/72$   
b.  $24/63$   
c.  $7/24$   
d.  $8/21$
12.  $7/8 \div 7/16$  reduced to the lowest terms = \_\_\_\_\_.  
a.  $1$   
b.  $2$   
c.  $7/2$   
d.  $7-1/32$
13. In numbers like  $52.25$ , any digits to the right of the decimal point represent \_\_\_\_\_.  
a. the part of the number greater than 1  
b. the part of the number less than 1  
c. an improper number  
d. an improper fraction
14. Of the numbers  $0.4761$ ,  $0.04761$ ,  $0.4671$ , and  $0.04671$ , which is the largest?  
a.  $0.4761$   
b.  $0.04761$   
c.  $0.4671$   
d.  $0.04671$

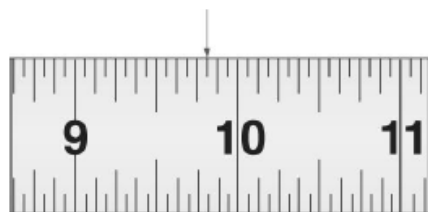
15. One sheet of drywall weighs 48.7 pounds. An order of 50 sheets will weigh \_\_\_\_\_.  
a. 2,532.0 pounds  
b. 2,435.0 pounds  
c. 2,430.0 pounds  
d. 243.5 pounds
16. A mason mixes 42 kilograms of mortar. Each kilogram of mortar mix requires 0.03 liters of water. Rounded to the nearest tenth, how many liters of water are required?  
a. 1.2 liters  
b. 1.3 liters  
c. 12.6 liters  
d. 13.2 liters
17. When a number is stated as a percentage, it means that the number represents a portion of \_\_\_\_\_.  
a. 100  
b. 64  
c. 50  
d. 16
18. When converting decimals to a percentage, simply move the decimal point \_\_\_\_\_.  
a. one place to the left  
b. one place to the right  
c. two places to the left  
d. two places to the right
19. When converted to a fraction and reduced to the lowest terms, the number 0.86 equals \_\_\_\_\_.  
a.  $\frac{86}{100}$   
b.  $\frac{43}{50}$   
c.  $\frac{14}{100}$   
d.  $\frac{7}{50}$
20. The marked measurement in the figure indicates \_\_\_\_\_.  
a.  $2\frac{1}{8}$  inches  
b.  $2\frac{3}{16}$  feet  
c.  $2\frac{1}{4}$  inches  
d.  $2\frac{1}{2}$  feet



21. The marked measurement in the figure indicates \_\_\_\_\_.  
 a.  $2\frac{3}{10}$  centimeters  
 b. 2.35 meters  
 c. 2.5 meters  
 d. 2.6 centimeters



22. The marked measurement in the figure indicates \_\_\_\_\_.  
 a.  $9\frac{11}{16}$  centimeters  
 b.  $9\frac{11}{16}$  inches  
 c.  $9\frac{13}{16}$  inches  
 d.  $9\frac{13}{16}$  centimeters



23. When taking an inside measurement with a tape measure, be sure to \_\_\_\_\_.  
 a. add the length of the tape measure case  
 b. subtract the length of the tape measure case  
 c. remove the tape from the case  
 d. add the thickness of the tape hook
24. In the metric system, each millimeter equals \_\_\_\_\_.  
 a.  $\frac{1}{1000}$  of a centimeter  
 b.  $\frac{1}{100}$  of a centimeter  
 c.  $\frac{1}{10}$  of a centimeter  
 d. 10 centimeters
25. If 1 meter = 3.28 feet, converting 612 feet to meters and rounding to the nearest hundredth gives \_\_\_\_\_.  
 a. 186.59 meters  
 b. 200.79 meters  
 c. 1865.85 meters  
 d. 2007.97 meters
26. If 1 pound = 2.205 kilograms, converting 165 pounds to kilograms and rounding to the nearest tenth gives \_\_\_\_\_.  
 a. 10.3 centimeters  
 b. 74.8 kilograms  
 c. 149.6 kilograms  
 d. 363.8 kilometers

27. One cubic meter represents a cube-shaped space measuring 1 meter in all three dimensions. In centimeters, how long is each side?
- 1 centimeter
  - 10 centimeters
  - 100 centimeters
  - 1,000 centimeters
28. On the Fahrenheit scale, how many degrees are there between the freezing and boiling points of water?
- $60^{\circ}$
  - $100^{\circ}$
  - $180^{\circ}$
  - $212^{\circ}$
29. Using the formula  $^{\circ}\text{C} = 5/9 (^{\circ}\text{F} - 32)$ ,  $70^{\circ}\text{F}$  converted to Celsius and rounded to the nearest degree is \_\_\_\_\_.
- $21^{\circ}\text{C}$
  - $53^{\circ}\text{C}$
  - $126^{\circ}\text{C}$
  - $158^{\circ}\text{C}$
30. An angle measure 36 degrees, so it's classified as \_\_\_\_\_.
- adjacent
  - opposite
  - acute
  - obtuse
31. A triangle's three angles always add up to \_\_\_\_\_.
- $45^{\circ}$
  - $90^{\circ}$
  - $180^{\circ}$
  - $360^{\circ}$
32. The circumference of a circle is \_\_\_\_\_.
- the distance around the outside of the circle
  - the length of a line passing across the circle through the center
  - the length of a line from the center to any point on the circle
  - another name for the mathematical constant pi
33. Given the equation  $1/2 \times b \times h$ , the area of a triangular roof section with a base of 7 feet and a height of 3.5 feet is \_\_\_\_\_.
- $7 \text{ ft}^2$
  - $12 \text{ ft}^2$
  - $12.25 \text{ ft}^2$
  - $24.5 \text{ ft}^2$

34. Which choice is a metric system unit for volume?

- a. cu m
- b. sq m
- c. cu ft
- d. sq ft

35. A 9-inch cube has a volume of \_\_\_\_\_.

- a.  $243 \text{ yd}^3$
- b.  $729 \text{ in}^3$
- c.  $818 \text{ in}^2$
- d.  $1,243 \text{ in}^3$