Math for the Trades Study Guide (GS0012G)

True/False
Indicate whether the statement is true or false.

_____ 1. Level is at a 90° angle to plumb.

Multiple Choice
Identify the choice that best completes the statement or answers the question.

_____ 2. Bisecting an angle divides it into how many parts?
- a. 1
- b. 2
- c. 3
- d. 4

_____ 3. The square root of 144 is:
- a. 14
- b. 9
- c. 12
- d. 22

_____ 4. In a right triangle with Side a = 6″ and Side b = 8″, how long is Side c?
- a. 14"
- b. 10"
- c. 8"
- d. 6"

_____ 5. What is the length of a hypotenuse that has a rise of 9 feet and a run of 12 feet?
- a. 20 feet
- b. 22 feet
- c. 15 feet
- d. 21 feet

_____ 6. To the nearest cubic yard, how many cubic yards of concrete are needed to lay a $\frac{1}{2}$′-thick base for a circular footer with a diameter of 30 feet?
- a. 13 cu.yd.
- b. 39 cu. yd.
- c. 47 cu. yd.
- d. 353 cu. yd.

Numeric Response

7. 93 + 71 = _____

8. 56 + 13 + 93 = _____

9. 48 − 29 = _____

10. 1,090 − 874 = _____

11. 21 × 87 = _____

12. 301 × 211 = _____

13. 546 ÷ 15 = _____

14. $699 \div 29 =$ _____

15. A truck holding 530 pallets leaves 165 at its first drop-off. How many pallets are left on the truck? _____

16. It takes a crew 57 hours to install cabinets in one office. How long will it take the crew to install cabinets in 17 offices? _____

17. $\dfrac{3}{4} + \dfrac{3}{8} =$ _____

18. $9\dfrac{3}{8} - 5\dfrac{11}{16} =$ _____

19. It takes $1\dfrac{1}{4}$ hours to erect 12 sections of scaffolding. How many sections can be erected within 10 hours?

20. $11.59 + 4.03$ _____

21. $45.338 - 18.45$ _____

22. 67×8.3 _____

23. Convert the following decimals to fractions.

    28.987´ in sixteenths _____

24. 2.971˝ in thirty-seconds _____

25. A drywaller wants to order core board for a 15-story elevator shaft. Each floor uses 18.5 sheets. Calculate the number of boards needed. Add 10% of the total for waste.Round up to the nearest whole sheet.

26. On a print with a scale of $\dfrac{1}{2}$˝ = 1´, a 20´ hallway would be _____ inches long.

27. On a print with a scale of $\dfrac{1}{4}$˝ = 1´, the scale drawing of the living room is 5˝ by 6˝. The dimensions of the actual room will be _____ ft. by _____ ft.

Completion

Complete each statement.

28. The diameter of a circle is twice as long as the _____ of the circle.

29. The formula for finding the area of a triangle is _____.

30. What is the volume **of the metal** in a hollow metal pipe 15˝ long with an outside diameter of 5" and an inside diameter of $4 \frac{1}{2}$˝? _____

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Answer Section

NUMERIC RESPONSE

    2. ANS: B   PTS: 1
    3. ANS: C   PTS: 1
    4. ANS: B   PTS: 1
    5. ANS: C   PTS: 1
    6. ANS: A   PTS: 1
    1. ANS: T   PTS: 1
    7. ANS: 164

        PTS: 1
    8. ANS: 162

        PTS: 1
    9. ANS: 15

        PTS: 1
  10. ANS: 212

        PTS: 1
  11. ANS: 1,827

        PTS: 1
  12. ANS: 63,511

        PTS: 1
  13. ANS: 36.4

        PTS: 1
  14. ANS: 24 Remainder 3

        PTS: 1
  15. ANS: $530 - 165 = 365$

        PTS: 1
  16. ANS: $57 \times 17 = 969$

        PTS: 1

  17. ANS: $1\frac{1}{8}$

        PTS: 1

18. ANS: 3 $\frac{11}{16}$

     PTS: 1

19. ANS: $(10 \div 1 \frac{1}{4}) \times 12 = 96$ sections of scaffolding

     PTS: 1

20. ANS: 15.62

     PTS: 1

21. ANS: 26.888

     PTS: 1

22. ANS: 556.1

     PTS: 1

23. ANS: 28´ -11 $\frac{14}{16}$˝ or 28´ -11 $\frac{7}{8}$˝

     PTS: 1

24. ANS: 2 $\frac{31}{32}$˝

     PTS: 1

26. ANS: 10

     PTS: 1

27. ANS: 20, 24

     PTS: 1

25. ANS: 305.25 boards needed

     PTS: 1

COMPLETION

28. ANS: radius

     PTS: 1

29. ANS: A = $\frac{1}{2}$ bh

     PTS: 1

30. ANS: 55.93 cu in

     PTS: 1