

ALEKS® Geometry and Linear Equations Quiz #1

Beginning and Intermediate Algebra Combined / MATH 102 - Fall 2014 – 504 (Prof. Miller)

Student Name/ID:

Instructor Note:

Directions: Every problem is worth two points. One point is for trying the problem and showing your work and one point is for getting the correct answer. There are an additional five points for demonstrating the study strategy that is posted on the board and talked about at the beginning of class.

1. Two trains leave stations 504 miles apart at the same time and travel toward each other. One train travels at 95 miles per hour while the other travels at 85 miles per hour. How long will it take for the two trains to meet?

Do not do any rounding.

hours

2. What number is equal to $\sqrt{9}$?

3. Find the perimeter of the square. Be sure to write the correct unit in your answer.



27 cm

4. Solve the following proportion for v

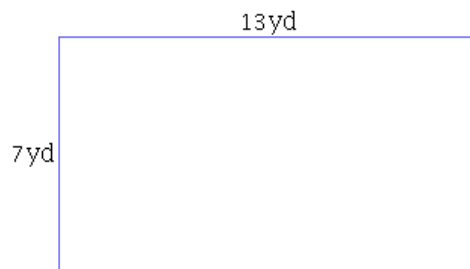
$$\frac{v}{7} = \frac{8}{3}$$

Round your answer to the nearest tenth.

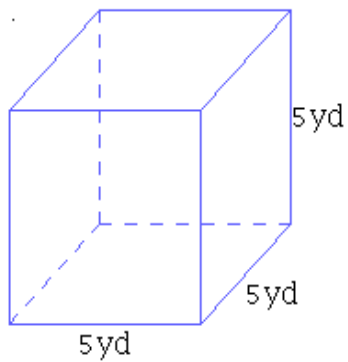
5. (a) An angle measures 31° . What is the measure of its supplement?

(b) An angle measures 49° . What is the measure of its complement?

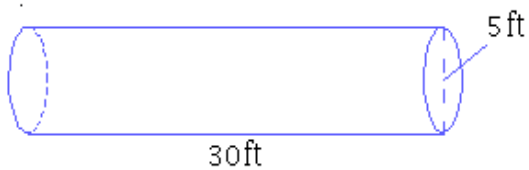
6. Find the area of this rectangle.



7. Find the volume of the rectangular prism.

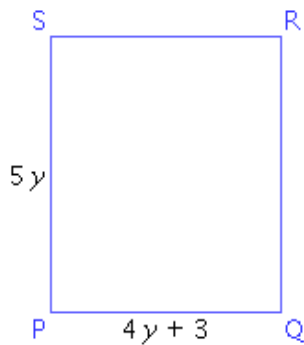


8. The diameter of a construction pipe is 5 ft. If the pipe is 30 ft long, what is its volume?
(Use the value 3.14 for π and round your answer to the nearest cubic foot. Be sure to include the correct unit in your answer.)



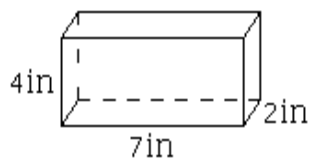
9. The perimeter of the rectangle below is 132 units. Find the length of side \overline{PS}

Write your answer without variables.



10. At the city museum, child admission is \$5.30 and adult admission is \$8.80. On Wednesday, 154 tickets were sold for a total sales of \$1050.70. How many adult tickets were sold that day?

11. Find the surface area of this rectangular prism. Be sure to include the correct unit in your answer.

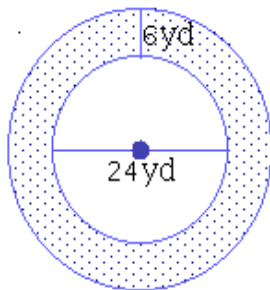


12. A wire is first bent into the shape of a rectangle with width 11 cm and length 13 cm. Then the wire is unbent and reshaped into a triangle. If each side of the triangle has equal length, what is this length?

13. A swimming pool has to be drained for maintenance. The pool is shaped like a cylinder with a diameter of 9 m and a depth of 1.9 m. If the water is pumped out of the pool at the rate of 15 m^3 per hour, how many hours does it take to empty the pool?

Use the value 3.14 for π and round your answer to the nearest hour.

14. At the park there is a pool shaped like a circle with diameter 24 yd. A ring-shaped path goes around the pool. Its width is 6 yd.



We are going to give a new layer of coating to the path. If one gallon of coating can cover 8 yd^2 how many gallons of coating do we need? Note that coating comes only by the gallon, so the number of gallons must be a whole number. (Use the value 3.14 for π)

15. Rachel invested her savings in two investment funds. The amount she invested in Fund A was 4 times as much as the amount she invested in Fund B. Fund A returned a 6% profit and Fund B returned a 5% profit. How much did she invest in Fund B, if the total profit from the two funds together was \$3480?

Geometry and Linear Equations Quiz #1 Answers for class Beginning and Intermediate Algebra Combined / MATH 102 - Fall 2014 – 504

1. 2.8 hours
2. 3
3. 108 cm
4. $v = 18.7$
5. measure of the supplement: 149°
measure of the complement: 41° .
6. 91 yd^2
7. 125 yd^3
8. 589 ft^3
9. $PS = 35$
10. 67 tickets
11. 100 in^2
12. 16 cm
13. 8 hour(s)
14. 71 gallons of coating
15. Amount invested in Fund B: \$12,000