

MLC

MTH060 Review Problems for the Final Exam

This is not a sample test. These problems are designed to get you started on your review for the test. Study the homework and your textbook for a more complete review. Do your work on another sheet of paper.

1. Section 1.1 Use the table to write a mathematical sentence that describes Sam's age in terms of Christine's age.

Sam's age	12	17	29	62
Christine's age	7	12	24	57

2. Section 1.2 Write each phrase as an algebraic expression.

a) 5 divided into c b) the difference of 9 and h c) the quotient of d and m d) the sum of 3 and k

3. Section 1.3 Evaluate the expression $\frac{1}{3}x$ for the given values of x to complete the table.

x	2	3	5	9	15	18	20
$\frac{1}{3}x$							

4. Section 1.4

- a) Write an expression in terms of r for the number of miles Joe walked if he walked for 3 hours at r miles per hour.
 b) If Joe walked 4 miles per hour, how many miles did he walk?

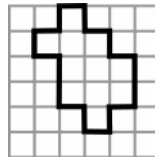
5. Section 1.5 Use the table to write an equation that expresses the second variable in terms of the first.

q	r
14.5	12
13	10.5
9.7	7.2
6.3	3.8

6. Section 2.1 Solve the equations. Check your solutions.

a) $x + 7 = 12$ b) $\frac{m}{8} = 6$ c) $5b = 35$ d) $t - 7 = 24$

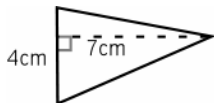
7. Section 2.2 If each grid square is one centimeter, find the perimeter and area of the figure:



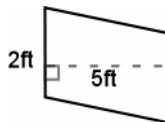
8. Section 2.3 Find a formula and evaluate it to answer the question: Susan drove her car for 605 miles on 11 gallons of gas. What is the fuel efficiency of Susans car?

9. Section 2.4 Find the areas of the figures:

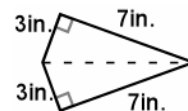
a)



b)



c)



10. Section 2.5 Identify the unknown quantity and choose a variable to represent it. Write an equation that models the problem. Solve the equation.

Anita's bowling score is 22 points higher than Phillip's. If Anita's score is 225, what is Phillip's score?

11. Section 3.2 Compute the sums.

a) $-2 + (-17)$ b) $17 + (-2)$ c) $-3 + 31$

12. Section 3.3 Subtract.

a) $13 - (-5)$ b) $-5 - (-12)$ c) $-31 - 1$

13. Section 3.4 Solve.

a) $5p = -4$

b) $-10x = -30$

c) $\frac{x}{-5} = 4$

d) $\frac{P}{3} = -8$

14. Section 3.5 Choose a variable to represent the unknown. Write an equation that models the problem and then solve the equation.

Jerry's Market sold facial tissues at a loss of \$0.45 for each box of tissues they sold. At the end of the promotion they had lost \$343.80. How many boxes of tissue did they sell?

15. Section 4.1 Simplify the expressions.

a) $20 - 9 \div 3$

b) $24 - 6 \div 3 - 15 \cdot 2$

16. Section 4.2 Write an algebraic expression for the English phrase.

16 more than the difference of p and 8

17. Section 4.3 Solve the equations. Check your solutions.

a) $\frac{7b}{3} = 14$

b) $15 = 4m + 3$

c) $5 - 3x = 14$

d) $32 = \frac{x}{5} - 8$

18. Section 4.4 The acceleration of a car is given by $a = \frac{f - s}{t}$, where f is the final speed, s is the starting speed, and t is the time to reach the final speed. Find f if $s = 12$, $t = 8$, and $a = 10$.

19. Section 4.5 Simplify.

a) $30 \div (-3) + 6(-3 - 3)$

b) $-3(7) - 9$

c) $\frac{-18 + 5(3)}{-6 + 2(4)}$

20. Section 5.1 Perform the calculations.

a) $\frac{(340,500,000,000)(50,000,000)}{(600,000,000,000,000)}$

b) $\frac{1.2 \times 10^{52}}{(3 \times 10^{21})(2 \times 10^5)}$

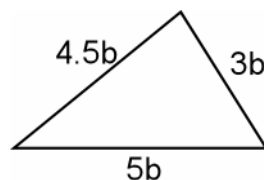
21. Section 5.2 Use the order of operations to simplify.

a) $19 - (-4 + 7)^2$

b) $-8 + 3 \cdot 4^2$

22. Find the circumference of a circle with a radius of 3.5cm.

23. Section 5.3 Find the perimeter of the triangle.

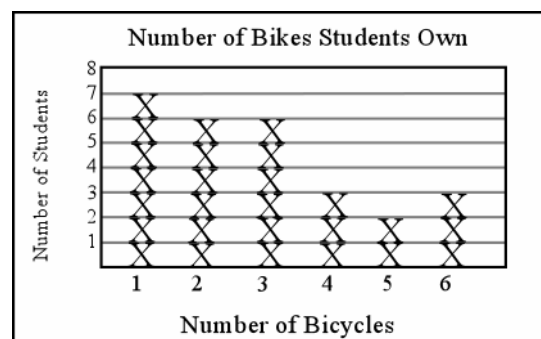


24. Section 6.2 The histogram shows the results of a survey that asked students how many bicycles they own.

a) How many students were surveyed?

b) What is the mode of the data?

c) What is the mean of the data?



25. Section 6.3 Make a table and plot the graphs of the equations.

a) $5x - 4 = y$

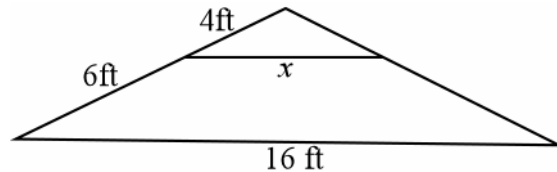
b) $y = 7 - x^2$

26. Section 8.3 Solve the proportions.

a) $\frac{x}{13} = \frac{9}{15}$

b) $\frac{7.5}{m} = \frac{15}{12.5}$

27. Similar Triangles Find the unknown dimension.



28. Section 9.1 Solve the equations.

a) $-3p - 5 - 4p = 18 - 3p + 5$

b) $5(-4m) + m - 25 = 53 + 5m$

29. Section 9.2 Solve the equations.

a) $-3(x - 6) = 12$

b) $12 = -8 - (4x - 4)$

30. Dimensional Analysis #1 Use dimensional analysis to perform the conversions. Show your procedure including unit fractions.

a) 14 lbs to kg

b) 25 cm to microns

31. Dimensional Analysis #2 Use dimensional analysis to perform the conversions. Show your procedure including unit fractions.

a) $137in.^2$ to ft^2

b) $25ft^3$ to yd^3

ANSWERS:

1. Sam's age = Christine's age + 5

2. a) $\frac{c}{5}$

b) $9 - h$

c) $\frac{d}{m}$

d) $3 + k$

3.

x	2	3	5	9	15	18	20
$\frac{1}{3}x$	$\frac{2}{3}$	1	$\frac{5}{3}$	3	5	6	$\frac{20}{3}$

4. a) $3r$

b) 12 miles

5. $r = q - 2.5$

6. a) $x = 5$

b) $m = 48$

c) $b = 7$

c) $t = 31$

7. Perimeter = 18 cm, Area = $11 cm^2$

8. $e = \frac{m}{g}$

$e = \frac{605}{11}$

$e = 55$

9. a) $14cm^2$

b) $10ft^2$

c) $21in^2$

10. Let $P =$ Phillip's score; $P + 22 = 225$; $P = 203$

