Problem Set 28

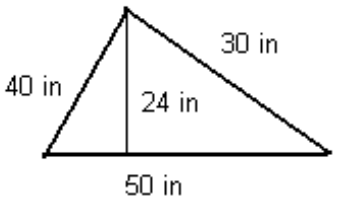
Answers

1. Use digits to write the number two hundred two billion, forty-seven million, one hundred ninety-five thousand, sixty-one. 202 047 195 061

2. Round 825038219 to the nearest ten million. 830 000 000

3. Consider the following numbers: 4200, 168, 404040, 13575, 9806
   a) Find all numbers from the list that are divisible by 15. 4200, 404040, 13575
   b) Find all numbers from the list that are divisible by 20. 4200, 404040
   c) Find all numbers from the list that are divisible by 12. 4200, 168, 404040

4. Find the perimeter and area of the triangle shown on the picture below. Include units in your computation and answer. $P = 120$ in $A = 600$ in^2



5. Find the average of $2, -7, 18, -42, 0, 4,$ and -3. -4

6. Find the average of the prime numbers between 6 and 18. 12

7. Find $\frac{4}{7}$ of 28. 16

8. Write $\frac{3}{5}$ as a fraction with denominator 40. $\frac{24}{40}$

9. Reduce $\frac{56}{63}$ to lowest terms. $\frac{8}{9}$

10. Which fraction is larger, $\frac{2}{7}$, or $\frac{3}{10}$? $\frac{3}{10}$

11. Perform the indicated operations. Show all steps.
    a) $7 - 2^3 + (-5) + (-5)(-2) + (-5)(-2)(-2) =$ -16
    b) $-2 + (-5)^2 - (-2)^5 + (-2)(-4)^2\,((-3)^2 - (-2)^2) =$ -105
    c) $\dfrac{(-2)^3}{1 - (4 - (7 - 3^2 \div ((-3)^2 - 2 \cdot 3)))} =$ -8
    d) $\dfrac{-6^2 + 3(4 - |6|) \div 6 + (-2)^2 - 11}{4 - (-3) + 12 \div 4 \cdot 5} =$ -2

12. Evaluate each of the following expressions if $a = -2$ and $b = 3$.

a) $a^2 - 2ab + b^2 =$ 25

b) $(2a - 3b)(a^3 - 7a - a^2b) =$ 78

13. Solve each of the following equations. Make sure to check your solution.

a) $\frac{x+1}{5} = -2$ -11

b) $4t - 3 = -31$ -7

c) $-7y - 1 = 13$ -2

d) $13a - 7 = 45$ 4

