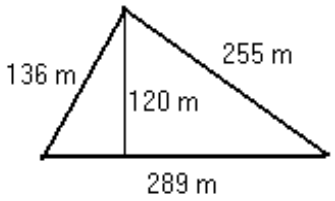
Problem Set 31

Answers

1. Use words to write the number 209 003 659 020. two hundred nine billion, three million, six hundred fifty-nine thousand, twenty

2. Round 419 683 455 to the nearest million 420 000 000

3. Compute the perimeter and area of the triangle shown on the picture below. Include units in your computation and answer. $P = 680\,\text{m}$ $A = 17\,340\,\text{m}^2$



4. Compute the sum of the eight smallest prime numbers. 77

5. Compute the least common multiple of 24, 42, and 90. 2520

6. Consider the following numbers: 27 625, 40 102, 6390, 4155, 8765. Find all numbers from the list that are divisible by

   a) 6. 6390 b) 15. 6390, 4155 c) 18. 6390

7. Compute $\frac{3}{8}$ of 240. 90

8. Write $\frac{11}{25}$ as a fraction with denominator 100. $\frac{44}{100}$

9. Reduce $\frac{24}{120}$ to lowest terms. $\frac{1}{5}$

10. Which fraction is greater, $\frac{4}{7}$ or $\frac{6}{11}$? $\frac{4}{7}$

11. Write $2\frac{3}{5}$ as an improper fraction. $\frac{13}{5}$

12. Write $\frac{28}{3}$ as a mixed number. $9\frac{1}{3}$

13. Perform the indicated operations. Show all steps.

    a) $\frac{1}{2} + \frac{2}{7} = \frac{11}{14}$

    b) $\frac{2}{5} + 4 = \frac{22}{5}$

    c) $2 - \frac{5}{6} = \frac{7}{6}$

    d) $\frac{7}{10} - \frac{4}{15} = \frac{13}{30}$

    e) $\frac{3}{10} - \frac{2}{9} = \frac{7}{90}$

    f) $5 - \frac{2}{3} = \frac{13}{3}$

    g) $\frac{1}{3} \div \frac{7}{9} = \frac{3}{7}$

    h) $\frac{12}{13} \div 3 = \frac{4}{13}$

    i) $\dfrac{-2\,(-1)^2\,|(-3+10\div 5)\,(-3+6\div 6)|}{-2-(-3)\,|3^2-2^3|} = -4$

    j) $(-1)^2 - (-2)^2 + (-3)^2 - (-4)^2 + (-5)^2 = 15$

    k) $\dfrac{3\cdot 2^3 - |-2-(-2)\,(7-10)|}{2^4 - 4^2 + 1} = 16$

14. Evaluate the expression $-16x^2 + 8x + 10$ if

    a) $x = 0$ 10 b) $x = 1$ 2 c) $x = 2$ -38

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

    a) $2w - 7 = -5$ 1 b) $y + \frac{1}{2} = \frac{7}{8}$ $\frac{3}{8}$ c) $\frac{x-5}{3} = 16$ 53 d) $\frac{2}{5}p = \frac{4}{11}$ $\frac{10}{11}$