1-1   Find $14 \, {}^2/_7 \%$ of 105.

1-2   Evaluate: $10 \, {}^2/_3 \; \cdot 2 \, {}^4/_5 \; \div \; 1 \, {}^1/_{15}$.

1-3   Find the volume, in cubic feet, of a rectangular prism:
$l = 18$ inches, $w = 1 {}^2/_3$ yards, and $h = 4$ feet

1-4   $3230_4 + 2133_4 + 2212_4 =$ _____ $_4$

1-5   Find the sum of the first ten terms of an arithmetic sequence whose
first and tenth terms are 18 and 42, respectively.

2-1   Evaluate: $\dfrac{32^4}{16^4}$.

2-2   Find the square root of the reciprocal of $7^{-2}$.

2-3   Davy Crockett has test scores of 98, 78, 93, and 91. What
score does he need on his next test to have an average of 92?

2-4   Find the diameter of a circle whose area is $\dfrac{36\pi}{\frac{1}{4}}$ sq. units.

2-5   Evaluate $7a^b + 3b^c + 5c^a$ for a = 5, b = 2, and c = 1.

3-1   There were 720 ways for first, second, and third place to be awarded
in an Olympic relay. How many Olympians participated in the relay?

3-2   Find the midpoint of (6, 2) and (-12, 8).

3-3   Find $A + C - B$ if $A =$ the number of prime numbers less than 100
$B =$ the smallest prime number
$C =$ the largest prime number below 100

3-4   Find the positive difference between the area and perimeter of
this figure.


12
26
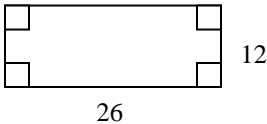
3-5   Evaluate: $\dfrac{27^{\frac{1}{3}} + \sqrt{9}}{16^{\frac{1}{4}} + \sqrt{16}}$.

4-1   Rachel has some marbles. She gave half of them to Wendy and then ${}^2/_3$ of
the remaining marbles to Lucy. If Rachel has 15 marbles left, how many
did she start with?

4-2   Write $0.4\overline{68}$ as a fraction in simplest form.

4-3   Simplify: $- {}^1/_2[3(2x - 4y)] - {}^1/_3[2(6x + 9y)]$.

4-4   Find the total volume if the height of the cone is 9, the diameter is 2,
and the height of the cylinder is 9 (leave $\pi$ in your answer).



4-5   13 miles + 1764 feet = _____ yards

**EXTRA**

E1.   Evaluate: $\sqrt{[156 \div (4 + 8)]^2 - [3^2 + 3]^2}$.

E2.   Solve for $n$.   ${}^8/_9 \, n - (-6) = 30$

E3.   Evaluate $12^2 + 14^2 + 16^2$.

| Answers | |
|---|---|
| 1-1 | 15 |
| 1-2 | 28 |
| 1-3 | 30 (ft³) |
| 1-4 | 20301 |
| 1-5 | 300 |
| 2-1 | 16 |
| 2-2 | 7 |
| 2-3 | 100 |
| 2-4 | 24 |
| 2-5 | 186 |
| 3-1 | 10 |
| 3-2 | (-3, 5) |
| 3-3 | 120 |
| 3-4 | 236 |
| 3-5 | 1 |
| 4-1 | 90 |
| 4-2 | ²³²/₄₉₅ |
| 4-3 | -7x |
| 4-4 | 12π (u³) |
| 4-5 | 23,468 (yd) |
| E1 | 5 |
| E2 | 27 or n = 27 |
| E3 | 596 |