Problems

1. Express three-halves of one-half as a common fraction.
2. Evaluate: $\dfrac{30 \times 40 \times 50 \times 60}{3 \times 4 \times 5 \times 6}$
3. What is the maximum product that can be obtained by multiplying two distinct numbers from the given set? Express your answer as a common fraction.

$$\left\{\frac{7}{48}, \frac{3}{16}, \frac{1}{6}, \frac{5}{24}\right\}$$

4. How many cents would you receive in change when purchasing five candy bars at 99 ¢ each and paying with a \$5 bill?
5. Express $\frac{21}{11}$ as a repeating decimal.
6. Express the product $(0.4)(0.4)$ as a common fraction.
7. If the middle two digits of the number 9567 are interchanged, the resulting number would be how much larger?
8. Find $\sqrt{\sqrt{2,560,000}}$.
9. Find the product of $\left(\dfrac{1}{4}\right)^3 (8)^{-2}$
10. What is the exponent of 10 when $4^{12} \times 5^{20}$ is written in scientific notation?
11. Given $x = 3$ and $y = 2$, simplify $\frac{2x^3 - 3y^2}{6}$.
12. Find n if $\left(n + 16\dfrac{3}{26}\right) - 4\dfrac{7}{26} = 18\dfrac{23}{26}$. Express your answer as a mixed number in simplest form.
13. You purchased 4 hardback and 2 paperback books for \$35. The price of each hardback book was three times that of each paperback. How many dollars did each paperback book cost?
14. The four digit number $2NN4$ is divisible by 9 . Find the value of N.
15. What is the difference between the largest and smallest prime factors of $15,015$?
16. How many different three-letter sets of initials are possible using the letters of the alphabet?