

Worksheet #3

1. Eric takes 4 times longer to paint a ceiling than to paint a wall. He charges 20% more per hour to paint a ceiling than to paint a wall. Eric painted 5 ceilings and 12 walls. His hourly charge per wall was \$40 and his total earning was \$2520. How many hours did he work in total?

2. The following is an arithmetic sequence:  $N, N + K, N + 2K, N + 3K, \dots$ .  
The value of the 2024-th term of the sequence is 10000, and the value of the 1000-th term is 784. What is the value of  $N$  (the first term)?

3. Express  $0.5333\dots$  as a fraction in lowest terms.

4. A box contains 5 white marbles and 8 black marbles. Andrew took 2 marbles out of the box at random and placed them on the table. What is the probability that at least 1 of the marbles was white? Express the answer as a fraction in lowest terms.

5. Of a deck of 9 cards, 4 cards are aces. Dan was dealt, (at random), 3 cards, and at least one of the cards that was dealt to him was an ace. What is the probability that he was dealt at least 2 aces? Express the answer as a fraction in lowest terms.