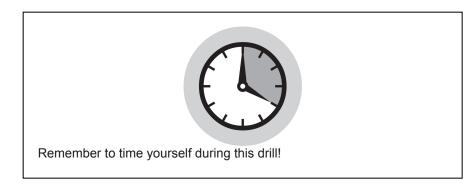# PRACTICE DRILL 1—LOWER LEVEL
Time yourself on this drill. When you are done, check your answers in Chapter 17.

Remember to time yourself during this drill!

1. How many distinct factors does the number 16 have?

   (A) 2
   (B) 4
   (C) 5
   (D) 6

2. Which of the following contains all the common factors of 12 and 48?

   (A) 1, 2, and 6
   (B) 12 and 24
   (C) 1, 2, 3, 4, and 6
   (D) 1, 2, 3, 4, 6, and 12

3. Which of the following is a multiple of 7?

   (A) 71
   (B) 87
   (C) 91
   (D) 104

4. Which of the following is NOT a multiple of 8?

   (A) 4
   (B) 16
   (C) 32
   (D) 56

5. Which of the following is a multiple of both 4 and 6?

   (A) 18
   (B) 32
   (C) 48
   (D) 54

6. The number 1,026 is NOT divisible by which of the following?

(A) 2
(B) 4
(C) 6
(D) 9

7. The sum of three consecutive, odd, positive integers is 21. What is the square of the smallest of the three integers?

(A) 9
(B) 25
(C) 36
(D) 49

8. A company's profit was \$95,000 in 2008. In 2018, its profit was \$570,000. The profit in 2018 was how many times as great as the profit in 2008?

(A) 4
(B) 6
(C) 8
(D) 10

9. Patrick is playing a video game with 45 levels. If he has completed two-fifths of the levels, how many levels has Patrick completed?

(A) 3
(B) 9
(C) 18
(D) 27

10. Alex's fish tank is currently one-fourth full of water only. When at its maximum capacity, the tank holds 11 gallons of water. How many gallons of water are presently in the fish tank?

(A) 28
(B) 37
(C) 56
(D) 84

11. Jake stands five-eighths of every day he works. In a four-day period, Jake stands the equivalent of how many full workdays?

(A) 1.5
(B) 2
(C) 2.5
(D) 3

12. Which of the following has the greatest value?

(A) $\dfrac{1}{3} + \dfrac{3}{5}$

(B) $\dfrac{4}{5} - \dfrac{1}{4}$

(C) $\dfrac{1}{10} \div \dfrac{2}{5}$

(D) $\dfrac{4}{5} \times \dfrac{1}{4}$

13. $\dfrac{1}{2} + \dfrac{1}{3} + \dfrac{1}{4} - \dfrac{1}{2} + \dfrac{2}{3} + \dfrac{3}{4} =$

(A) 2

(B) $\dfrac{5}{2}$

(C) 3

(D) $\dfrac{7}{2}$

14. The product of 0.027 and 10,000 is approximately

(A)   2.7
(B)   27
(C)   270
(D) 2,700

15. 1.576 =

(A) $1 \times \dfrac{7}{100} \times \dfrac{5}{10} \times \dfrac{6}{1,000}$

(B) $1 + \dfrac{5}{10} + \dfrac{7}{1,000} + \dfrac{6}{100}$

(C) $1 + \dfrac{7}{100} + \dfrac{6}{1,000} + \dfrac{5}{10}$

(D) $\dfrac{5}{10} + \dfrac{7}{100} + \dfrac{6}{1,000}$

Practice Drill 1—Lower Level

1.   **C**

List all the factors of 16: 1 and 16, 2 and 8, 4 and 4. Since 4 and 4 are not distinct from each other, count 4 only once. There are 5 distinct factors of 16. The correct answer is (C).

2.   **D**

List the factors of 12: 1 and 12, 2 and 6, 3 and 4. All of these are factors of 48. The correct answer is (D).

3.   **C**

A multiple of a number is that number multiplied by another number. Since $7 \times 13 = 91$, 91 is a multiple of 7. The correct answer is (C).

4.   **A**

A multiple of a number is that number multiplied by another number. 4 is a factor of 8, not a multiple of 8. The correct answer is (A).

5.   **C**

Use the answer choices to help here. 18 is a multiple of 6, but not of 4. Eliminate (A). 32 is a multiple of 4, but not of 6. Eliminate (B). 48 is a multiple of both 4 and 6, so keep this choice. 54 is a multiple of 6, but not of 4. Eliminate (D). The correct answer is (C).

6.   **B**

The question asks what is *NOT* a divisor of 1,026. Since 1,026 is even, eliminate (A). Do long division to test the other answer choices, and the choice with a remainder will be the answer. The correct answer is (B).

7.   **B**

Use the answer choices to help here. Since the three integers are odd, the square of the smallest integer will also be odd. Eliminate (C) because 36 is even. If the sum of the three is 21, the smallest integer can't be 7 because $7 + 7 + 7 = 21$. Eliminate (D) because 49 is the square of 7. Try one of the remaining two. Let's look at (B): The square root of 25 is 5, and $5 + 7 + 9 = 21$, so that works.

8.   **B**

If the question asks *how many times as great*, that translates to division. Divide the profit in 2018 by the profit in 2008. $\frac{\$570{,}000}{\$95{,}000} = 6$ The correct answer is (B).

9.   **C**

Multiply 45 by $\frac{2}{5}$. Another way to think about this is to divide by 5 and multiply by two: $45 \times \frac{2}{5} = 18$. The correct answer is (C).

10.   **A**

If the maximum capacity is 112 gallons and the tank is one-fourth full, multiply $\frac{1}{4}$ (112) - 28. The correct answer is (A).

11.   **C**

To find the total amount of time Jake stands over the course of all four days, add $\frac{5}{8}$ for every day he works. $\frac{5}{8} + \frac{5}{8} + \frac{5}{8} + \frac{5}{8} = \frac{20}{8}$, This reduces to $\frac{10}{4}$, $\frac{5}{2}$, or 2.5. The correct answer is (C).

12.   **A**

Test each of the answer choices to see which is the greatest. To add or subtract fractions, use a common denominator. In (A), $\frac{1}{3} + \frac{3}{5} = \frac{5}{15} + \frac{9}{15} = \frac{14}{15}$. Leave this choice and test the others. For (B), find a common denominator, which is 20. $\frac{4}{5} = \frac{16}{20}$ and $\frac{1}{4} = \frac{5}{20}$. $\frac{16}{20} - \frac{5}{20} = \frac{11}{20}$, which is slightly more than $\frac{1}{2}$. Eliminate (B) since it is less than (A). When dividing by a fraction, multiply by the reciprocal. To multiply fractions, multiply the numerators and denominators by each other. In (C), $\frac{1}{10} \div \frac{2}{5} = \frac{1}{10} \times \frac{5}{2} = \frac{5}{20}$. Since $\frac{5}{20}$ is less than $\frac{14}{15}$, eliminate (C) and try (D). In (D), $\frac{4}{5} \times \frac{1}{4} = \frac{4}{20}$, which is less than $\frac{14}{15}$. The correct answer is (A).

13.   **A**

Remember your order of operations and work left to right. Since the equation contains only addition and subtraction, find a common denominator. One possible common denominator of 2, 3, and 4 is 12, so $\frac{1}{2} + \frac{1}{3} + \frac{1}{4} - \frac{1}{2} + \frac{2}{3} + \frac{3}{4} = \frac{6}{12} + \frac{4}{12} + \frac{3}{12} - \frac{6}{12} + \frac{8}{12} + \frac{9}{12}$. Now, add all the numerators: $6 + 4 + 3 - 6 + 8 + 9 = 24$, and $\frac{24}{12} = 2$. The correct answer is (A).

14.   **C**

When multiplying by a multiple of 10, move the decimal to the right by however many 0s there are. Since this question contains multiplying by 10,000, move the decimal to the right four places. The correct answer is (C).

15.   **C**

1.576 means 1 whole unit plus a decimal, so eliminate (A) since all that multiplication will result in a very small number and (D) because it is missing the 1. Now, 0.576 breaks down into 0.5 + 0.07 + 0.006, or $\frac{5}{10} + \frac{7}{100} + \frac{6}{1,000}$. The correct answer is (C).