Fractions Prize Ladder

Use this key to check answers and read the explanations.

1. Five of eight equal panels have been painted blue. What fraction shows the blue part?

A. 5/8
B. 3/8
C. 5/3
D. 8/5

Correct answer: A. 5/8

There are five selected panels out of eight equal panels in the whole.

2. Which fraction equals 4/10 in lowest terms?

A. 4/5
B. 1/5
C. 2/5
D. 2/3

Correct answer: C. 2/5

Divide both parts of 4/10 by 2. Two and five have no common divisor greater than 1.

3. Which amount is less than one half?

A. 4/7
B. 4/9
C. 5/9
D. 6/11

Correct answer: B. 4/9

Half of nine ninths is 4.5 ninths, so 4/9 is below one half. The other amounts are above one half.

4. What mixed number represents 17/5?

A. 4 2/5
B. 2 3/5
C. 3 1/5
D. 3 2/5

Correct answer: D. 3 2/5

Seventeen fifths contain three complete groups of five and two fifths left over.

5. What is 2/7 + 3/7?

A. 5/14
B. 5/7
C. 6/7
D. 6/14

Correct answer: B. 5/7
Both amounts count sevenths. Add the numerators and keep the denominator 7.

6. What is 1/6 + 3/8 in simplest form?

A. 13/24
B. 1/2
C. 5/12
D. 11/24

Correct answer: A. 13/24
In twenty-fourths, the two amounts are 4/24 and 9/24. Their sum is 13/24.

7. A spool holds 7/8 meter of ribbon. You use 1/3 meter. How much stays on the spool?

A. 2/3 meter
B. 3/8 meter
C. 5/24 meter
D. 13/24 meter

Correct answer: D. 13/24 meter
Rewrite the amounts as 21/24 and 8/24. Their difference is 13/24 meter.

8. A board has 36 spaces. Mark 5/12 of them. How many spaces should you mark?

A. 18
B. 12
C. 15
D. 21

Correct answer: C. 15
One twelfth of 36 is 3. Five twelfths are five groups of 3, or 15.

9. A snack station puts 2/3 cup in each container. How many full containers can it fill with 4 cups?

A. 6
B. 2
C. 4
D. 8

Correct answer: A. 6
Divide 4 by 2/3. Multiplying by the reciprocal 3/2 gives 6.

10. Two strips measure 2 1/4 meters and 1 5/6 meters. What is their combined length?

A. 4 5/12 meters
B. 3 7/12 meters
C. 4 1/6 meters
D. 4 1/12 meters

Correct answer: D. 4 1/12 meters
The whole parts add to 3. The fractions are 3/12 and 10/12, making another 1 1/12 meters.

11. On two equal bars, 5/8 of the first is shaded and 7/12 of the second is shaded. What fraction of one bar is the difference?

A. 1/8
B. 1/12
C. 1/24
D. 1/6

Correct answer: C. 1/24
In twenty-fourths the shaded parts are 15/24 and 14/24, so the difference is 1/24.

12. A box contained 48 beads. On day one, a club used 1/4 of the original box. On day two, it used 1/3 of what remained. How many beads are left?

A. 20
B. 24
C. 28
D. 32

Correct answer: B. 24
Day one uses 12, leaving 36. Day two uses one third of 36, which is 12, leaving 24 beads.

13. A host uses 1/4 of a roll of paper, then uses half of the remainder. What fraction of the original roll is left?

A. 5/8
B. 1/4
C. 1/2
D. 3/8

Correct answer: D. 3/8
Three quarters of the roll remain after the first use. Half of those three quarters is 3/8 of the original.

14. A jug holds 2 3/4 cups. Each glass needs 2/5 cup. After filling as many whole glasses as possible, what amount remains?

A. 7/20 cup
B. 1/20 cup
C. 1/4 cup
D. 2/5 cup

Correct answer: A. 7/20 cup
Six glasses use 12/5 cups, or 48/20. The jug held 55/20, so 7/20 cup remains. That is less than another 2/5 cup.

15. A team has answered 5/9 of the questions. After it answers 6 more, it has answered 7/9. How many questions are in the complete set?

A. 30
B. 18
C. 27
D. 36

Correct answer: C. 27
The six questions cover a difference of 2/9. One ninth is therefore 3 questions, and nine ninths are 27.