

Fractions and Expressions Quiz

Time: 20 min. 6 questions.

Instructions

Answer each question in the space provided. Show your thinking for the short answer and numeric questions, since partial work can earn partial credit. You may draw number lines or pictures to help you solve any question.

Questions

1. What is $11/4$ written as a mixed number?

- A) $2 \frac{1}{4}$
- B) $2 \frac{3}{4}$
- C) $3 \frac{1}{4}$
- D) $4 \frac{1}{4}$

([Knowledge](#))

2. True or false: An improper fraction always has a numerator that is greater than its denominator.

([Knowledge](#))

3. Look at the expression $(8 - 3) + 5$. Explain why you must solve the part in the parentheses first, then find the final value of the expression.

([Skills](#))

4. Evaluate the algebraic expression $4n + 2$ when $n = 3$. What is the value of the expression?

([Skills](#))

5. Marcus solved the equation $x + 6 = 14$ by subtracting 6 from both sides and found $x = 8$. Which statement correctly verifies his solution?

- A) He should add 6 to both sides instead.
- B) His solution is correct because $8 + 6 = 14$.
- C) His solution is wrong because x must be greater than 14.
- D) He cannot check his answer without a calculator.

([Skills](#))

6. A recipe calls for $3/8$ cup of flour and then $4/8$ cup more flour is added. How much flour is used in total? Write your answer as a fraction.

([Skills](#))

Curriculum coverage

Question	Outcome alias
1	Knowledge
2	Knowledge
3	Skills
4	Skills

5	Skills
6	Skills

Answer key

1. **C) 3 1/4.** Eleven divided by four gives 2 whole groups of four with 3 left over, so $11/4$ equals 3 wholes and $1/4$ more ([Knowledge](#)).
2. **True.** By definition, an improper fraction has a numerator greater than its denominator, which means it represents a quantity greater than one whole ([Knowledge](#)).
3. **Sample answer:** The order of operations says you must complete the operation inside the parentheses before doing any operation outside them. So $(8 - 3) = 5$ first, then $5 + 5 = 10$, giving a final value of 10 ([Skills](#)).
4. **14.** Substitute 3 for n: $4 \times 3 = 12$, then $12 + 2 = 14$ ([Skills](#)).
5. **B) His solution is correct because $8 + 6 = 14$.** Verifying a solution means substituting the value back into the original equation and checking that both sides are equal ([Skills](#)).
6. **7/8 cup.** Since both fractions share the same denominator, add the numerators and keep the denominator the same: $3/8 + 4/8 = 7/8$ ([Skills](#)).