

Equivalent Fractions and Simplest Form

Unit: Fractions - Student Practice Worksheet

Overview: Kabir was given $\frac{2}{4}$ of a chocolate bar and Anaya was given $\frac{1}{2}$ of an identical one. Kabir was delighted — he had two pieces and she only had one. Then they put the bars side by side.

Practice Questions (30 Total)

Section A - Easy

Q1. Same-length bars, one in halves and one in fourths. Equivalent to $\frac{1}{2}$?



same length, more parts

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

Q2. Simplify $\frac{4}{8}$.

- ☐ A. $\frac{2}{4}$
- ☐ B. $\frac{1}{2}$
- ☐ C. $\frac{4}{4}$
- ☐ D. $\frac{1}{4}$

Q3. Simplify $\frac{6}{9}$.

- ☐ A. $\frac{3}{9}$
- ☐ B. $\frac{1}{3}$
- ☐ C. $\frac{2}{3}$
- ☐ D. $\frac{6}{3}$

Q4. Rewrite $\frac{2}{3}$ with denominator 9.

$$\frac{2}{3} \rightarrow \frac{?}{9}$$

- ☐ A. $\frac{2}{9}$
- ☐ B. $\frac{3}{9}$
- ☐ C. $\frac{8}{9}$
- ☐ D. $\frac{6}{9}$

Q5. Simplify $\frac{12}{16}$.

- ☐ A. $\frac{6}{8}$
- ☐ B. $\frac{3}{4}$
- ☐ C. $\frac{1}{4}$
- ☐ D. $\frac{12}{4}$

Q6. Simplify $\frac{10}{15}$.

- ☐ A. $\frac{2}{3}$
- ☐ B. $\frac{5}{15}$
- ☐ C. $\frac{1}{3}$
- ☐ D. $\frac{10}{5}$

Q7. Rewrite $\frac{3}{4}$ with denominator 12.

$$\frac{3}{4} \rightarrow \frac{?}{12}$$

- ☐ A. $\frac{3}{12}$
- ☐ B. $\frac{6}{12}$
- ☐ C. $\frac{9}{12}$
- ☐ D. $\frac{12}{12}$

Q8. Simplify $\frac{5}{10}$.

- ☐ A. $\frac{5}{5}$
- ☐ B. $\frac{1}{5}$
- ☐ C. $\frac{2}{5}$
- ☐ D. $\frac{1}{2}$

Q9. Write $\frac{1}{3}$ with a denominator of 15.

- ☐ A. $\frac{3}{15}$
- ☐ B. $\frac{5}{15}$
- ☐ C. $\frac{1}{15}$
- ☐ D. $\frac{15}{45}$

Q10. Simplify $\frac{8}{12}$ fully, dividing by 4 not just by 2.

- ☐ A. $\frac{2}{3}$
- ☐ B. $\frac{4}{6}$
- ☐ C. $\frac{1}{3}$
- ☐ D. $\frac{8}{4}$

Section B - Medium

Q11. Simplify $\frac{24}{36}$ using the HCF 12.

$$\frac{24}{36} \quad \div 12$$

- ☐ A. $\frac{12}{18}$
- ☐ B. $\frac{2}{3}$
- ☐ C. $\frac{6}{9}$
- ☐ D. $\frac{4}{6}$

Q12. Are $\frac{3}{4}$ and $\frac{9}{12}$ equivalent?

- ☐ A. No
- ☐ B. Only if you add 6 to each part
- ☐ C. Yes, both parts multiplied by 3
- ☐ D. Cannot be decided

Q13. Simplify $\frac{45}{60}$.

- ☐ A. $\frac{9}{12}$
- ☐ B. $\frac{15}{20}$
- ☐ C. $\frac{3}{4}$
- ☐ D. $\frac{1}{4}$

Q14. Are $\frac{2}{5}$ and $\frac{6}{10}$ equivalent? Compare after simplifying.

$$\frac{2}{5} \quad \text{vs} \quad \frac{6}{10}$$

- ☐ **A.** No — $\frac{6}{10}$ simplifies to $\frac{3}{5}$
- ☐ **B.** Yes
- ☐ **C.** Yes, both multiplied by 3
- ☐ **D.** Cannot be decided

Q15. Are $\frac{7}{8}$ and $\frac{21}{24}$ equivalent?

- ☐ **A.** No
- ☐ **B.** Only if simplified first
- ☐ **C.** Yes, both parts multiplied by 3
- ☐ **D.** Cannot be decided

Q16. Simplify $\frac{18}{24}$.

- ☐ **A.** $\frac{9}{12}$
- ☐ **B.** $\frac{3}{4}$
- ☐ **C.** $\frac{6}{8}$
- ☐ **D.** $\frac{1}{4}$

Q17. $\frac{3}{5} = \frac{x}{20}$. Find x.

$$\frac{3}{5} = \frac{x}{20}$$

- ☐ **A.** 3
- ☐ **B.** 15
- ☐ **C.** 12
- ☐ **D.** 60

Q18. Simplify $\frac{42}{56}$.

- ☐ **A.** $\frac{21}{28}$
- ☐ **B.** $\frac{6}{8}$
- ☐ **C.** $\frac{7}{8}$

☐ D. $\frac{3}{4}$

Q19. Simplify $\frac{36}{48}$.

☐ A. $\frac{3}{4}$

☐ B. $\frac{18}{24}$

☐ C. $\frac{9}{12}$

☐ D. $\frac{6}{8}$

Q20. Find x if $\frac{x}{7} = \frac{15}{35}$, by simplifying the right-hand side.

☐ A. 5

☐ B. 15

☐ C. 7

☐ D. 3

Section C - Challenge

Q21. $\frac{5}{8}$ and $\frac{7}{12}$ drawn on 24ths. Which is greater?



5/8 vs 7/12 on 24ths

☐ A. $\frac{7}{12}$

☐ B. They are equal

☐ C. $\frac{5}{8}$

☐ D. Cannot be compared

Q22. Why does adding 1 to both parts of $\frac{1}{2}$ not give an equivalent fraction?

☐ A. Because $\frac{2}{3}$ is bigger than $\frac{1}{2}$

☐ B. Because you may only add to the top

☐ C. Because 1 is too small to add

☐ D. It does give an equivalent fraction

Q23. Simplify $\frac{105}{135}$.

☐ A. $\frac{21}{27}$

☐ B. $\frac{7}{9}$

☐ C. $\frac{35}{45}$

☐ D. $\frac{5}{9}$

Q24. Arrange $\frac{2}{3}$, $\frac{3}{4}$, $\frac{5}{6}$ from smallest to largest.

$\frac{2}{3}$, $\frac{3}{4}$, $\frac{5}{6}$

☐ A. $\frac{5}{6}$, $\frac{3}{4}$, $\frac{2}{3}$

☐ B. $\frac{3}{4}$, $\frac{2}{3}$, $\frac{5}{6}$

☐ C. $\frac{2}{3}$, $\frac{5}{6}$, $\frac{3}{4}$

☐ D. $\frac{2}{3}$, $\frac{3}{4}$, $\frac{5}{6}$

Q25. Which of these is NOT equivalent to $\frac{5}{7}$?

☐ A. $\frac{10}{14}$

☐ B. $\frac{15}{21}$

☐ C. $\frac{6}{8}$

☐ D. $\frac{20}{28}$

Q26. Find x if $\frac{4}{9} = \frac{28}{x}$.

☐ A. 36

☐ B. 72

☐ C. 63

☐ D. 28

Q27. Simplify $\frac{121}{143}$ by dividing by 11.

$\frac{121}{143} \div 11$

☐ A. $\frac{11}{13}$

☐ B. $\frac{12}{14}$

☐ C. $\frac{11}{14}$

☐ D. It is already simplest

Q28. Simplify $\frac{84}{126}$.

☐ A. $\frac{42}{63}$

☐ B. $12/18$

☐ C. $6/9$

☐ D. $2/3$

Q29. Simplify $144/180$.

☐ A. $12/15$

☐ B. $4/5$

☐ C. $72/90$

☐ D. $8/10$

Q30. Compare $11/15$ and $7/10$ by writing both over 30.

☐ A. $7/10$

☐ B. $11/15$

☐ C. They are equal

☐ D. Cannot be compared

Answer Key

Q1: (A) (a) $\frac{2}{4}$ — both parts doubled. Option (b) comes from adding 1 to each part, which does not preserve the value.

Q2: (B) (b) $\frac{1}{2}$. Option (a) is equivalent but not yet in simplest form.

Q3: (C) (c) $\frac{2}{3}$. Divide both by 3. Option (b) divides only the numerator.

Q4: (D) (d) $\frac{6}{9}$. The bottom was multiplied by 3, so the top must be too. Option (a) changes only the denominator.

Q5: (B) (b) $\frac{3}{4}$. Option (a) is Kabir's stopping point — correct, but it still divides by 2.

Q6: (A) (a) $\frac{2}{3}$. Both parts divide by 5.

Q7: (C) (c) $\frac{9}{12}$. The bottom tripled, so the top must triple too.

Q8: (D) (d) $\frac{1}{2}$. Both parts divide by 5.

Q9: (B) (b) $\frac{5}{15}$. The bottom was multiplied by 5, so the top must be as well.

Q10: (A) (a) $\frac{2}{3}$. Divide both by 4. Option (b) divides by 2 only and is not finished.

Q11: (B) (b) $\frac{2}{3}$, dividing both by their HCF of 12. The other options are equivalent but not simplest.

Q12: (C) (c) Yes, both parts multiplied by 3. Simplifying $\frac{9}{12}$ also returns $\frac{3}{4}$.

Q13: (C) (c) $\frac{3}{4}$, dividing both by 15.

Q14: (A) (a) No — $\frac{6}{10}$ simplifies to $\frac{3}{5}$, not $\frac{2}{5}$. The numerator was tripled but the denominator only doubled.

Q15: (C) (c) Yes, both parts multiplied by 3. Simplifying $\frac{21}{24}$ by 3 returns $\frac{7}{8}$.

Q16: (B) (b) $\frac{3}{4}$, dividing both by 6.

Q17: (C) (c) 12. The denominator was multiplied by 4, so the numerator must be too.

Q18: (D) (d) $\frac{3}{4}$, dividing both by their HCF of 14.

Q19: (A) (a) $\frac{3}{4}$, dividing both by 12. Every other option is a halfway step.

Q20: (D) (d) 3. Simplify $\frac{15}{35}$ by dividing both by 5, which gives $\frac{3}{7}$.

Q21: (C) (c) $\frac{5}{8}$. Rewrite both over 24: $\frac{15}{24}$ against $\frac{14}{24}$.

Q22: (A) (a) Because $\frac{2}{3}$ is bigger than $\frac{1}{2}$. Adding the same amount changes the ratio between the parts; only multiplying or dividing preserves it.

Q23: (B) (b) $\frac{7}{9}$, dividing both by 15.

Q24: (D) (d) $\frac{2}{3}$, $\frac{3}{4}$, $\frac{5}{6}$. Over a denominator of 12 they become $\frac{8}{12}$, $\frac{9}{12}$ and $\frac{10}{12}$.

Q25: (C) (c) $\frac{6}{8}$, which simplifies to $\frac{3}{4}$. It comes from adding 1 to each part of $\frac{5}{7}$, which never preserves the value.

Q26: (C) (c) 63. The numerator was multiplied by 7, so the denominator must be too.

Q27: (A) (a) $\frac{11}{13}$. Both parts divide by 11, since $121 = 11 \times 11$ and $143 = 11 \times 13$.

Q28: (D) (d) $\frac{2}{3}$, dividing both by their HCF of 42. The others are all partial steps along the way.

Q29: (B) (b) $\frac{4}{5}$, dividing both by their HCF of 36.

Q30: (B) (b) $\frac{11}{15}$. Over 30 they become $\frac{22}{30}$ and $\frac{21}{30}$.

You've got this! Keep learning and shining! - Ruchi Math Coaching