

Grade 4 - Equivalent Fractions - Test Answer Key

Common Core 4.NF.A.1 · maths-pdf.fr/en/

Use this answer key and scoring guide to grade the equivalent fractions test. Each solution shows the multiplication or division used, and the scoring notes explain partial credit out of 20 points.

Grade 4 · Common Core State Standards: **4.NF.A.1**

Question 1 - Strips [2 pts]

A: $\frac{2}{3}$. B: $\frac{8}{12}$.

$3 \times 4 = 12$ and $2 \times 4 = 8$, so they are equal.

$$\frac{2}{3} = \frac{8}{12}$$

Scoring: 1 point for both fractions; 1 point for a correct explanation or equation.

Question 2 - Missing numerators [2 pts]

(a) $5 \times 2 = 10$, so $3 \times 2 = 6$. (b) $6 \times 2 = 12$, so $5 \times 2 = 10$.

(a) 6 (b) 10

Scoring: 1 point for each correct number.

Question 3 - Hundredths [2 pts]

(a) $10 \times 10 = 100$, so $7 \times 10 = 70$. (b) $5 \times 20 = 100$, so $4 \times 20 = 80$.

(a) 70 (b) 80

Scoring: 1 point for each correct number.

Question 4 - Which are equal? [2 pts]

$3 \times 2 = 6$ and $4 \times 2 = 8$: yes. $3 \times 3 = 9$ and $4 \times 3 = 12$: yes. $\frac{8}{12} = \frac{2}{3}$: no. $\frac{5}{6}$: no.

$\frac{6}{8}$ and $\frac{9}{12}$

Scoring: 2 points for both and no extras; 1 point if one is missing or one extra is listed.

Question 5 - Ethan's error [2 pts]

To make an equivalent fraction, both parts must be multiplied (or divided) by the same number. Adding 1 changes the amount.

$$3 \times 4 = 12 \text{ and } 2 \times 4 = 8, \text{ so } \frac{2}{3} = \frac{8}{12}.$$

Adding does not keep the value; $\frac{8}{12}$

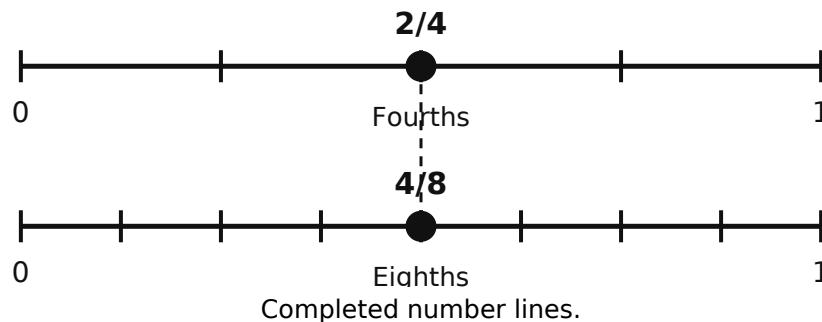
Scoring: 1 point for the explanation; 1 point for $\frac{8}{12}$.

Question 6 - Number lines [3 pts]

(a) The bottom line is cut into eighths, and the dot is at the 4th mark: $\frac{4}{8}$.

(b) $\frac{2}{4} = \frac{4}{8}$.

(c) $\frac{2}{4}$ is one half, and $\frac{1}{2} = \frac{5}{10}$.



(a) $\frac{4}{8}$ (b) $\frac{2}{4} = \frac{4}{8}$ (c) $\frac{5}{10}$

Scoring: 1 point for each part. Accept any correct equation in (b).

Question 7 - Store fractions [3 pts]

(a) $3 \times 10 = 30$, so $\frac{30}{100}$.

(b) $100 \div 25 = 4$ and $25 \div 25 = 1$, so $\frac{1}{4}$.

(c) $8 \div 2 = 4$ and $6 \div 2 = 3$, so $\frac{3}{4}$.

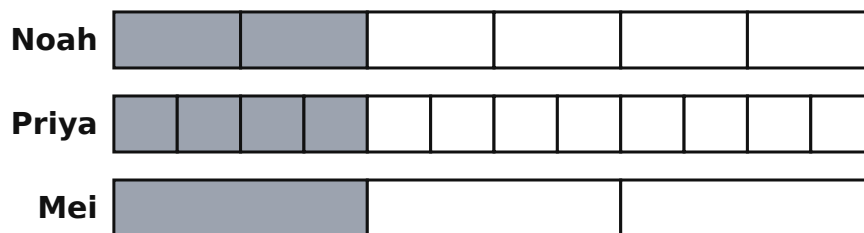
(a) $\frac{30}{100}$ (b) $\frac{1}{4}$ (c) $\frac{3}{4}$

Scoring: 1 point for each part.

Question 8 - Pizza comparison [3 pts]

(a) $6 \times 2 = 12$ and $2 \times 2 = 4$, so $\frac{2}{6} = \frac{4}{12}$. They ate the same amount.

(b) $3 \times 2 = 6$ and $1 \times 2 = 2$, so $\frac{1}{3} = \frac{2}{6}$. Yes.



All three strips shade the same length.

(a) yes (b) yes

Scoring: (a) 1 point for yes, 1 point for the multiplication reason; (b) 1 point.

Question 9 - Write one [1 pt]

Multiply the numerator and denominator by 2: $\frac{5 \times 2}{8 \times 2} = \frac{10}{16}$. Any correct multiple works, such as $\frac{15}{24}$.

$\frac{10}{16}$

Scoring: 1 point for any correct equivalent fraction.

Total

20 points