

Grade 6 · Ratios and Ratio Language · Test Answer Key

Common Core 6.RP.A.1, 6.RP.A.3a · mathovore.fr

This answer key gives worked solutions and a scoring guide for each question on the Grade 6 ratios test. Points are awarded for correct setup, correct computation, and a clear final answer. Partial credit is described in each scoring note.

Grade 6 Common Core: 6.RP.A.1 · 6.RP.A.3a

Question 1: Walkers and riders (2 points)

(a) 16:12. Divide both by 4: 4:3.

(b) 12:28 . Divide both by 4: 3:7 .

Scoring: 1 point for each correct ratio in simplest form. An unsimplified ratio such as 16:12 earns no point, and the order of the quantities must be correct.

Question 2: Equivalent ratios (2 points)

(a) 8:12 simplifies to 2:3 and 6:9 simplifies to 2:3 . **Yes, they are equivalent.**

(b) $7 \times 5 = 35$, so $y = 5 \times 5 = 25$.

Scoring: (a) 1 point for the correct answer with a valid reason. (b) 1 point for 25.

Question 3: Rice and water (2 points)

$3 \times 3 = 9$ cups of rice go with 15 cups of water.

$6 \times 2 = 12$, so water is $10 \times 2 = 20$ cups.

$3 \times 6 = 18$ cups of rice go with 30 cups of water.

Missing values: 9, 20, 18.

Scoring: 2 points for all three correct; 1 point for two correct; 0 points for one or none.

Question 4: Playlist songs (3 points)

(a) Pop is 5 parts and $35 \div 5 = 7$, so each part is 7 songs. Rock is $2 \times 7 = 14$ songs.

(b) Total: $35 + 14 = 49$ songs.

(a) 14 rock songs. (b) 49 songs.

Scoring: (a) 1 point for finding one part equals 7, 1 point for 14. (b) 1 point for 49 (accept follow-through from part a).

Pop	7	7	7	7	7
Rock	7	7			

Each unit is 7 songs: 35 pop and 14 rock.

Question 5: Lemonade strength (3 points)

Compare using the same amount of water. The least common multiple of 7 and 10 is 70.

Liam: $2:7 = 20:70$, so 20 cups of juice per 70 cups of water.

Mei: $3:10 = 21:70$, so 21 cups of juice per 70 cups of water.

Mei's has more juice for the same water. **Mei's lemonade is stronger.**

Scoring: 1 point for a valid common comparison amount, 1 point for both equivalent ratios correct, 1 point for the correct conclusion.

Question 6: Reading pace (3 points)

(a) $15:20$. Divide by 5: $3:4$.

(b) $36 \div 4 = 9$, so pages are $3 \times 9 = \mathbf{27}$ pages.

(c) $45 \div 3 = 15$, so minutes are $4 \times 15 = \mathbf{60}$ minutes.

Scoring: 1 point for each correct part.

Question 7: Class makeup (3 points)

(a) Total parts: $7 + 8 = 15$. Each part: $30 \div 15 = 2$. Girls: $7 \times 2 = 14$. Boys: $8 \times 2 = 16$.

(b) Girls become $14 + 4 = 18$. The ratio is $18:16$. Divide by 2: $9:8$.

(a) 14 girls and 16 boys. (b) 9:8.

Scoring: (a) 1 point for finding each part is 2 students, 1 point for both counts correct. (b) 1 point for 9:8; accept follow-through from part a.

Girls	2	2	2	2	2	2	2
Boys	2	2	2	2	2	2	2

Each unit is 2 students: 14 girls and 16 boys.

Question 8: Marble bag (2 points)

(a) Total marbles: $8+5+7=20$. Red to all: $8:20=2:5$.

(b) Green to yellow: $5:7$.

Scoring: (a) 1 point for $2:5$ in simplest form (0 points if the total is wrong). (b) 1 point for $5:7$ in the correct order.

Total
20 points