GRADE 7 · UNIT 3

Operations with Rational Numbers

Practice Test · 24 points

Name_____
Date_____
Period_____

Show your work. Circle your final answer. You may use your own notes.

PART 1 — Procedural Fluency

Give every answer exactly — an exact decimal, or a fraction in lowest terms. Do not round.

1. $-6.372 + (-4.85)$

2. $4\frac{3}{4} + 3.16$ **2 points**

3. $-3.417 - 15.08$

4. $-4\frac{3}{4} - \left(-\frac{2}{3}\right)$ **2 points**

5. $\left(-\frac{4}{5}\right)\left(-\frac{7}{8}\right)$

6. $-5.24 \cdot 2.7$ **2 points**

7. $-33.81 \div (-2.45)$

8. $-4\frac{1}{5} \div \frac{7}{10}$ **2 points**

PART 2 — Choosing the Operation

Part a is the decision — which operation the situation calls for. Part b is the arithmetic. Each is worth one point.

9. A diver descends at 14.5 feet per minute and reaches −87 feet.

a. Which operation finds how long the descent took? **1 point**

Circle one: ADD SUBTRACT MULTIPLY DIVIDE

b. How long did the descent take? **1 point**

Time (minutes)	

10. A drone climbs at 37.5 feet per minute for 6 minutes.

a. Which operation finds how far it climbed? **1 point**

Circle one: ADD SUBTRACT MULTIPLY DIVIDE

b. How far did it climb? **1 point**

Distance (feet)	

PART 3 — Applying the Operations

Show your work. Write down each operation you performed and the result, and label each one with what it stands for. If an earlier part is wrong, a later part still earns its point when the right operation is applied to your own earlier answer — but only if that work is on the page.

11. A hiker recorded her elevation at three checkpoints.

Checkpoint 1: 36.4 feet
Checkpoint 2: −21.7 feet
Checkpoint 3: −60.2 feet

a. What was the change in elevation from checkpoint 1 to checkpoint 2? **1 point**

Change (feet)	

b. What was the change in elevation from checkpoint 2 to checkpoint 3? **1 point**

Change (feet)	

12. Each day's high temperature is given as a departure from the month's average of 76.2°F.

Monday: −4.3°F
Tuesday: +1.8°F
Wednesday: −6.5°F

a. What was Wednesday's high temperature? **1 point**

Wednesday's High (°F)	

b. How much warmer was Tuesday than Wednesday? **1 point**

Difference (°F)	

13. A jacket costs $68.00. It is marked one-quarter off. A delivery charge of 0.05 times the discounted price is then added.

a. What is the discounted price of the jacket? **1 point**

Discounted Price	

b. What is the delivery charge? **1 point**

Delivery Charge	

c. What is the total cost? **1 point**

Total Cost	

14. A gym charges a $15.00 joining fee and $2.75 for each visit.
Marisol has $50.00 to spend.

a. How much of that can go on visits? **1 point**

For Visits	

b. How many visits can she afford? **1 point**

Number of Visits	

PART 4 — Finding the Mistake

15. The elevation changed from −287.4 feet to −145.9 feet. Devon wrote:

change = −287.4 − (−145.9) = −141.5 feet

a. Name the mistake Devon made. **1 point**

b. What is the correct change in elevation? **1 point**

Correct Change (feet)	

16. Kaya wants to know how many gym visits she can afford. The gym charges a $15.00 joining fee and $2.75 for each visit. She has $62.00. She wrote: **1 point**

62.00 ÷ 2.75 ≈ 22.55, so 23 visits.

Select every statement that is true of Kaya's work.

- ○ A Division is the wrong operation for this problem.
- ○ B She never subtracted the $15.00 joining fee.
- ○ C Her division, 62.00 ÷ 2.75, was done wrongly.
- ○ D She should have rounded down instead of up.
- ○ E The correct answer is 17 visits.

Every correct statement must be marked to earn the point.