



Unit rates

GRADE 6 MATH

Answer keys for the exit ticket, practice worksheet, and homework, plus notes for the lesson slides. Each answer shows the steps and the most likely wrong answer (“If wrong”), so you can tell what a mistake means, not just that it is one. Questions go from **fluency** to **application** to **reasoning**.

Exit Ticket — answer key

Use: End of the unit-rate lesson. 5–8 min, independent. One skill only, so a low score is a clean signal on **unit rates** — not confounded with other content.

Timing: 5–

1. 3 apples cost \$1.50. Cost of one apple? **FLUENCY**

Answer: **\$0.50**

1. Divide total cost by number of apples: $1.50 \div 3$.
2. $1.50 \div 3 = 0.50$.

If wrong: Multiplied instead of divided (\$4.50) → doesn’t grasp that a unit rate is cost *per one*.

2. 120 miles in 3 hours — speed in mph? **APPLICATION**

Answer: **40 mph**

1. Unit rate = miles $\div$ hours: $120 \div 3$.
2. $120 \div 3 = 40$ miles per hour.

If wrong: Answered 360 → multiplied; or wrote $3 \div 120$ → divided in the wrong order (rate is the quantity *per one* hour).

3. 5 notebooks \$6.25 — each, then 7? **APPLICATION**

Answer: **\$1.25 each; \$8.75 for 7**

1. Each: $6.25 \div 5 = 1.25$.
2. Seven: $1.25 \times 7 = 8.75$.

If wrong: Found \$1.25 but added instead of scaling for 7; or never found the unit rate first.

4. Better buy per pen: A 4/\$2.00 vs B 6/\$2.70? REASONING

Answer: **Store B (\$0.45 < \$0.50)**

1. A: $2.00 \div 4 = \$0.50$ per pen.
2. B: $2.70 \div 6 = \$0.45$ per pen.
3. $0.45 < 0.50$, so B is the better buy.

If wrong: Chose A because its total price is lower — compared totals, not the per-pen unit rate.

Quick answers for fast checking:

#	Level	Answer
1	fluency	\$0.50
2	application	40 mph
3	application	\$1.25; \$8.75
4	reasoning	Store B

Practice Worksheet — answer key

Use: During the lesson after the mini-lesson/deck. The ramp (fluency → application → reasoning) lets you see exactly where understanding breaks.

Timing: 15–25 min · pairs or independent · circulate on items 7–9 (reasoning). Items 1–4 fluency, 5–7 application, 8–9 reasoning.

1. 2 lb rice \$3.00 — per pound? FLUENCY

Answer: **\$1.50**

1. $3.00 \div 2 = 1.50$.

If wrong: Multiplied → \$6.00.

2. 6 oranges \$2.40 — each? FLUENCY

Answer: **\$0.40**

1. $2.40 \div 6 = 0.40$.

If wrong: Divided $6 \div 2.40$ (wrong order).

3. 150 words / 5 min? APPLICATION

Answer: **30 words per minute**

1. $150 \div 5 = 30$.

If wrong: Answered 750 (multiplied) or $5 \div 150$.

4. 8 tickets \$52.00 — each? APPLICATION

Answer: **\$6.50**

1. $52.00 \div 8 = 6.50$.

If wrong: Rounding/place-value slip (e.g., \$6.05).

5. 3 lb apples \$5.55 — per lb, then 5 lb? APPLICATION

Answer: **\$1.85 per lb; \$9.25 for 5**

1. $5.55 \div 3 = 1.85$.

2. $1.85 \times 5 = 9.25$.

If wrong: Found unit rate but scaled with the wrong number of pounds.

6. 240 mi / 4 h — mph, then 7 h? APPLICATION

Answer: **60 mph; 420 miles**

1. $240 \div 4 = 60$.

2. $60 \times 7 = 420$.

If wrong: Used 4 h again instead of 7, or added 60 to 240.

7. 12 cans \$9.60 — per can, then how many for \$12? REASONING

Answer: **\$0.80 per can; 15 cans**

1. $9.60 \div 12 = 0.80$.

2. $12.00 \div 0.80 = 15$.

If wrong: Found the rate but multiplied by \$12 instead of dividing to count cans.

8. Better buy: A 5/\$4.00 vs B 8/\$6.00? REASONING

Answer: **Brand B (\$0.75 < \$0.80)**

1. A: $4.00 \div 5 = \$0.80$.
2. B: $6.00 \div 8 = \$0.75$.
3. $0.75 < 0.80 \rightarrow B$.

If wrong: Chose A because $\$4.00 < \$6.00$ — compared totals, not per-bar rate.

9. 2 cups flour / 3 cookies $\rightarrow$ 12 cookies? REASONING

Answer: **8 cups**

1. $12 \div 3 = 4$ batches of 3 cookies.
2. 4×2 cups = 8 cups. (Unit rate = $\frac{2}{3}$ cup per cookie; $\frac{2}{3} \times 12 = 8$.)

If wrong: Answered 6 (used 2×3) or ignored the ratio and gave 12.

Quick answers for fast checking:

#	Level	Answer
1	fluency	\$1.50
2	fluency	\$0.40
3	application	30 wpm
4	application	\$6.50
5	application	\$1.85; \$9.25
6	application	60 mph; 420 mi
7	reasoning	\$0.80; 15 cans
8	reasoning	Brand B
9	reasoning	8 cups

Homework — answer key

Use: Parallels the practice sheet one-to-one, so it reinforces without re-teaching. The on-sheet worked example makes it truly independent.

Timing: ~15 min at home · independent · review item 8 (better-buy reasoning) as the next-day warm-up.

1. 4 bagels \$5.00 — each? **FLUENCY**

Answer: **\$1.25**

1. $5.00 \div 4 = 1.25$.

If wrong: Multiplied $\rightarrow$ \$20.00.

2. 100 mi / 2 h — mph? **FLUENCY**

Answer: **50 mph**

1. $100 \div 2 = 50$.

If wrong: Answered 200 (multiplied).

3. 9 apples \$3.60 — each? **APPLICATION**

Answer: **\$0.40**

1. $3.60 \div 9 = 0.40$.

If wrong: Divided $9 \div 3.60$ (wrong order).

4. 7 markers \$8.75 — each? **APPLICATION**

Answer: **\$1.25**

1. $8.75 \div 7 = 1.25$.

If wrong: Place-value slip.

5. 3 lb grapes \$4.47 — per lb, then 6 lb? **APPLICATION**

Answer: **\$1.49 per lb; \$8.94 for 6**

1. $4.47 \div 3 = 1.49$.

2. $1.49 \times 6 = 8.94$.

If wrong: Scaled with wrong pounds, or stopped at the unit rate.

6. 180 pages / 6 days — per day, then 10 days? APPLICATION

Answer: **30 pages/day; 300 pages**

1. $180 \div 6 = 30$.
2. $30 \times 10 = 300$.

If wrong: Reused 6 days instead of 10.

7. 10 juice \$7.50 — per box, then how many for \$12? REASONING

Answer: **\$0.75 per box; 16 boxes**

1. $7.50 \div 10 = 0.75$.
2. $12.00 \div 0.75 = 16$.

If wrong: Multiplied by \$12 instead of dividing to count boxes.

8. Better buy: A 6/\$5.40 vs B 4/\$3.80? REASONING

Answer: **Brand A (\$0.90 < \$0.95)**

1. A: $5.40 \div 6 = \$0.90$.
2. B: $3.80 \div 4 = \$0.95$.
3. $0.90 < 0.95 \rightarrow A$.

If wrong: Chose B because $\$3.80 < \$5.40$ — compared totals, not per-cup rate.

Quick answers for fast checking:

#	Level	Answer
1	fluency	\$1.25
2	fluency	50 mph
3	application	\$0.40
4	application	\$1.25
5	application	\$1.49; \$8.94
6	application	30/day; 300
7	reasoning	\$0.75; 16 boxes
8	reasoning	Brand A

Lesson slides — teaching notes & timing

Mini-lesson deck: ~12–15 min, then launch into the practice sheet. Slide numbers match the deck.

Slide	~Time	Note
1/8	0:00	Frame the single skill: today we find the amount for exactly one. Keep it short.
2/8	1:00	Hook — do NOT resolve it yet. Let pairs argue. Surface ‘but the totals are different’ — the hook into why we need a per-one comparison.
3/8	3:00	Name the idea: unit rate = amount per one; find it by dividing total $\div$ how many. Anchor the word ‘per.’
4/8	5:00	WE1 — model the division out loud. $\$1.20 \div 3 = \$0.40$.
5/8	7:00	WE2 — extend past finding the rate to USING it ($\times$ 5 hours). This previews the application tier.
6/8	9:00	CFU — all-student response (thumbs/whiteboards). Watch for multiply-instead-of-divide. Answer \$1.25.
7/8	11:00	Resolve the hook with unit rates. Emphasize: compare per-one, not totals — this is the #1 misconception.
8/8	13:00	Launch the in-class practice sheet for consolidation.