

Carts, Change and Checking

GRADE 4

MATHEMATICS

F1.2

B2.4

An estimate is a check, not a shortcut. Work out roughly what the answer should be first, then calculate exactly. When the two disagree by a lot, one of them is wrong and it is worth knowing which.

PART A: ESTIMATE, THEN TOTAL

1. Round \$19, \$32 and \$48 to the nearest ten and add them: _____.
2. The exact total of \$19, \$32 and \$48 is \$_____.

PART B: CHANGE AND CHECKING

3. Amjad buys items at \$23, \$17 and \$35 and pays with a \$100 bill. Estimate his change first, then work it out exactly.

SHOW YOUR WORK

Answer: _____

4. Katya pays \$50 for a cart of \$12, \$14 and \$19 and is handed \$6 change. Show that the change is wrong, and give the right amount.

SHOW YOUR WORK

Answer: _____

5. Bereket pays with \$40 and receives \$13 change. His cart held three items, and two of them cost \$9 and \$11. What did the third item cost?

SHOW YOUR WORK

Answer: _____

6. Haruka's cart is \$12.40, \$8.30 and \$6.50. Estimate the total to the nearest dollar, then work it out exactly and give her change from \$30.

SHOW YOUR WORK

Answer: _____

PART C: IS THE ESTIMATE SAFE?

7. Xinyi has \$60. Her cart is \$22, \$19 and \$17. She checks by rounding every price up to the nearest ten. What does that tell her?
- (A) Rounding up gives \$70 and says no, but the exact cart is \$58, which she can afford
 - (B) Rounding up hides the real cost and should never be used
 - (C) Rounding up makes no difference to the decision
8. A cart of \$18, \$21 and \$34 is paid for with \$80. Which is the best estimate of the change?
- (A) About \$10 (B) About \$20 (C) About \$30

PART D: WRITE ONE THAT DISAGREES

9. Write a shopping problem where the estimate and the exact total lead to different answers about whether the cart can be afforded. Include an answer key showing both.

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ANSWER KEY

1. 100
2. 99
3. Rounding to \$20, \$20 and \$40 gives about \$80, so roughly \$20 change. The exact total is \$75, so his change is \$25.
4. Her total is \$45, so the change should be \$5. She was given \$1 too much.
5. \$7, because he spent \$27 altogether and the two known items come to \$20.
6. The estimate is about \$27, and the exact total is \$27.20, so her change from \$30 is \$2.80.
7. A) Rounding up gives \$70 and says no, but the exact cart is \$58, which she can afford
8. A) About \$10
9. Answers will vary and must give prices, an amount of money to spend, and an estimate and an exact total that land on opposite sides of it. Example: \$60 to spend on a cart of \$22, \$19 and \$17. Rounding every price up gives \$70 and says the cart is too dear, while the exact total of \$58 says it is affordable.

TEACHER NOTES

Extension beyond the grade-level expectation: Part B question 3 runs the transaction backwards from the change to a missing price, and Part C question 1 asks students to judge an estimating strategy rather than apply one. Rounding every price up is deliberately shown as safe but misleading, which is the honest answer rather than simply calling it wrong.