Name: Jade Cintron

Assessment

Concept Check

Unit 25 — Standards 8.8(A) - Supporting, 8.8(B) - Supporting

1 Mallory and Aimee save money for summer camp. They both plan to save the same amount of money. Mallory has $35 and plans to save $15 each week. Aimee has $5 and plans to save $50 each week. Which of the following can be used to determine x, the number of weeks it will take Mallory and Aimee to save the same amount of money?

A $35x + 5 = 15x + 50$

B $35x + 15 = 50x + 5$

C $50x + 35 = 15x + 5$

D $50x + 5 = 15x + 35$

2 An animal shelter conducts an annual fundraising drive. The animal shelter must raise at least enough money to cover their annual rental of $2,500 and weekly expenses of $450. So far, the shelter has received a one-time donation of $125 and pledged donations of $680 per week. Which inequality can be used to find w, the number of weeks it can take the shelter to meet the goal?

F $125w + 680 \leq 2{,}500w + 450$

G $125w + 680 \geq 2{,}500w + 450$

H $680w + 125 \leq 450w + 2{,}500$

J $680w + 125 \geq 450w + 2{,}500$

3 Amber and Jesse are each given a clue about a mystery number. Amber's clue says *the sum of half a number and eighteen*. Jesse's clue says *the difference of eleven and three times a number*. If Amber and Jesse have the same mystery number, which equation can be used to find p, the mystery number?

A $2(p + 18) = (11 - 3)p$

B $2p + 18 = 3 - 11p$

C $\frac{1}{2}p + 18 = 11 - 3p$

D $\frac{1}{2}(p + 18) = (11 - 3)p$

4 Which situation is best represented by the inequality $12x + 70 \geq 10x + 80$?

F Cell phone company A charges an $80 deposit and $10 each month for unlimited service. Cell phone company B charges a $70 deposit and $12 each month for unlimited service. After how many months, x, will cell phone company A cost more than cell phone company B?

G Caroline receives $80 for her birthday and earns $10 each time she babysits. Addison has saved $70 and earns $12 each time she babysits. How many times must the girls babysit, x, so that Addison has at least as much money as Caroline?

H The science club plans a field trip. A trip to an observatory will cost $80 for gas plus a $10 entrance fee per member. A trip to a planetarium will cost $70 for gas plus a $12 entrance fee per member. How many miles, x, can the science club travel so that the observatory trip is less expensive than the trip to the planetarium?

J Marco wants to rent a drum set. At Music World, the cost to rent drums is $12 per month plus an $80 deposit. Instrumental Music rents drums for $10 per month with a $70 deposit. How many months, x, can Marco rent drums from Music World and pay less than he will at Instrumental Music?

5 Two shipping companies charge different amounts to ship a package. Company A charges $5.50 for the first pound and $0.40 for each additional pound. Company B charges $6.75 for the first pound and $0.35 for each additional pound. If the cost to ship a package is the same for both companies, what is the weight in pounds, x, of the package?

A $5.5 + 0.4x = 6.75 + 0.35x$

B $5.5x + 0.4 = 6.75x + 0.35x$

C $5.5 + 0.4(x - 1) = 6.75 + 0.35(x - 1)$

D $5.5(x - 1) + 0.4 = 6.75(x - 1) + 0.35$

Assessment

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Standards 8.8(A) - Supporting, 8.8(B) - Supporting — **Unit 25**

For problems 6 and 7, write a real-world problem that corresponds to the equation or inequality given.

6 $20 + 10x > 28 + 8x$

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7 $\frac{3}{4}x = 18 - \frac{1}{2}x$

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8 Two hikers start at different points on a hiking trail. The first hiker starts at 300 yards from the trailhead and hikes at a rate of 150 yards per minute. The second hiker starts at 50 yards from the trailhead and hikes at a rate of 180 yards per minute. Write an equation or inequality to find m, the number of minutes the hikers walk until the second hiker is walking ahead of the first hiker.

9 Jocelyn and Hannah shop for jeans and T-shirts. Jocelyn buys one pair of jeans for $39 and eight T-shirts. Hannah buys one pair of jeans for $45 and six T-shirts. If each girl spends the same total amount for her purchases, write an equation to find p, the price of one T-shirt.

10 The concession stand keeps track of sales each night. On the first night, the stand began with $272 and sold 87 hamburgers. On the second night, the concession stand began with $251 and sold 93 hamburgers. If the total amount of money the concession stand has at the end of each night is the same, write an equation to determine h, the price of one hamburger.

11 Albert and Makayla are each renting a car for one day. Albert's rental agreement states that the car costs $35 per day and $0.15 per mile driven. Makayla's agreement states that the car she is renting costs $45 per day and $0.10 per mile driven. Write an equation to determine the number of miles, m, Albert and Makayla drive if they spend the same amount of money on their rentals.