5

MONEY

2004A

1. **(A)** Six people are fundraising, so each must raise $1500/6 = \$250$.

2005B

1. **(A)** The scouts bought $1000/5 = 200$ groups of 5 candy bars at a total cost of $200 \cdot 2 = 400$ dollars. They sold $1000/2 = 500$ groups of 2 candy bars for a total of $500 \cdot 1 = 500$ dollars. Their profit was $\$500 - \$400 = \$100$.

2009A

1. **Answer (E):** Because $\frac{128}{12} = 10\frac{2}{3}$, there must be 11 cans.

2009B   1. **Answer (B):** Make a table for the cost of the muffins and bagels:

Cost of Muffins	Cost of Bagels	Total Cost
$0 \cdot 0.50 = 0.00$	$5 \cdot 0.75 = 3.75$	3.75
$1 \cdot 0.50 = 0.50$	$4 \cdot 0.75 = 3.00$	3.50
$2 \cdot 0.50 = 1.00$	$3 \cdot 0.75 = 2.25$	3.25
$3 \cdot 0.50 = 1.50$	$2 \cdot 0.75 = 1.50$	3.00
$4 \cdot 0.50 = 2.00$	$1 \cdot 0.75 = 0.75$	2.75
$5 \cdot 0.50 = 2.50$	$0 \cdot 0.75 = 0.00$	2.50

The only combination which is a whole number of dollars is the cost of 3 muffins and 2 bagels.

2011A   1. **Answer (D):** The text messages cost $\$0.05 \cdot 100 = \$5.00$, and the 30 minutes of excess chatting cost $\$0.10 \cdot 30 = \$3.00$. Therefore the total bill came to $\$5 + \$3 + \$20 = \$28$.

2014B   1. **Answer (C):** Leah has 7 pennies and 6 nickels, which are worth 37 cents.

2009A   2. **Answer (A):** The value of any combination of four coins that includes pennies cannot be a multiple of 5 cents, and the value of any combination of four coins that does not include pennies must exceed 15 cents. Therefore the total value cannot be 15 cents. The other four amounts can be made with, respectively, one dime and three nickels; three dimes and one nickel; one quarter, one dime and two nickels; and one quarter and three dimes.

2017A

2. **Answer (D):** The cheapest popsicles cost $3.00 \div 5 = \$0.60$ each. Because $14 \cdot \$0.60 = \$8.40$ and Pablo has just $8, he could not pay for 14 popsicles even if he were allowed to buy partial boxes. The best he can hope for is 13 popsicles, and he can achieve that by buying two 5-popsicle boxes (for $6) and one 3-popsicle box (for $2).

OR

If Pablo buys two single popsicles for $1 each, he could have bought a 3-popsicle box for the same amount of money. Similarly, if Pablo buys three single popsicles or both one 3-popsicle box and one single popsicle, he could have bought a 5-popsicle box for the same amount of money. If Pablo buys two 3-popsicle boxes, he could have bought a 5-popsicle box and a single popsicle for the same amount of money. The previous statements imply that a maximum number of popsicles for a given amount of money can be obtained by buying either at most one single popsicle and the rest 5-popsicle boxes, or a single 3-popsicle box and the rest 5-popsicle boxes. When Pablo has $8, he can obtain the maximum number of popsicles by buying two 5-popsicle boxes and one 3-popsicle box. This gives a total of $2 \cdot 5 + 1 \cdot 3 = 13$ popsicles.

2004A

3. **(E)** Since $20 is 2000 cents, she pays $(0.0145)(2000) = 29$ cents per hour in local taxes.

2014A

3. **Answer (E):** In the morning, Bridget sells half of her loaves of bread for $\frac{1}{2} \cdot 48 \cdot \$2.50 = \$60$. In the afternoon, she sells $\frac{2}{3} \cdot 24 = 16$ loaves of bread for $16 \cdot \frac{1}{2} \cdot \$2.50 = \$20$. Finally, she sells the remaining 8 loaves of bread for $8. Her total cost is $48 \cdot \$0.75 = \$36$. Her profit is $60 + 20 + 8 - 36 = 52$ dollars.

2016A

3. **Answer (C):** Because $\$12.50 = 50 \cdot \$0.25$, Ben spent $\$50$. David spent $\$50 - \$12.50 = \$37.50$, and the two together paid $\$87.50$.

2000

4. **Answer (D):** Since Chandra paid extra $\$5.06$ in January, her December connect time must have cost her $\$5.06$. Therefore, her monthly fee is $\$12.48 - \$5.06 = \$7.42$.

2008B

4. **Answer (C):** A single player can receive the largest possible salary only when the other 20 players on the team are each receiving the minimum salary of $\$15,000$. Thus the maximum salary for any player is $\$700,000 - 20 \cdot \$15,000 = \$400,000$.

2011B

4. **Answer (C):** Bernardo has paid $B - A$ dollars more than LeRoy. If LeRoy gives Bernardo half of that difference, $\frac{B-A}{2}$, then each will have paid the same amount.

2005A

5. **(A)** If Dave buys seven windows separately he will purchase six and receive one free, for a cost of $\$600$. If Doug buys eight windows separately, he will purchase seven and receive one free, for a total cost of $\$700$. The total cost to Dave and Doug purchasing separately will be $\$1300$. If they purchase fifteen windows together, they will need to purchase only 12 windows, for a cost of $\$1200$, and will receive 3 free. This will result in a savings of $\$100$.