

## 7.EE.2: Worksheet

### Solutions

1. Are the expressions  $6(a + 0.5) - 1$  and  $6a + 3$  equivalent? Why or why not? **No, they're not because  $6(a + 0.5) - 1$  comes out to  $6a + 2$ , not  $6a + 3$ .**
2. Write two equivalent expressions to  $5x - 5.5$ . **Answers may vary. Some options are  $5(x - 1.1)$  and  $2x - 2.5 + 3x - 3$ .**
3. Jane just had lunch at Dairy King, and she wants to leave a 16% tip. What are two different expressions that show her total cost relative to her bill before tip ( $b$ )? **Her two expressions are  $b + 0.16b$  and  $1.16b$ .**
4. Using the information from the previous questions, if Jane's bill before tip was \$15.70, what was her total cost? (Round to the nearest cent.) **Her total cost was \$18.21.**
5. Every flavor of macaroon at Mac's Macs costs  $d$  dollars a piece. If Jeremy buys 3 pistachio, 12 vanilla, and 7 red apple macaroons, what's an expression for his total cost? **They're all the same price, so his expression is  $22d$ ,  $d(3+12+7)$ , or  $3d + 12d + 7d$ .**
6. Using the information from the previous question, what are two different expressions for Jeremy's total cost if Mac lowers the price to  $d - 0.50$  dollars per macaroon? **His new total is  $22(d - 0.5)$ , or  $22d - 11$ .**
7. Scones & Stuff is having a huge 30% off sale this week. Write two expressions to show your total cost if you buy  $s$  scones. What does each expression tell us about the situation? **Our two expressions are  $s - 0.3s$  and  $0.7s$ . The first expression clearly shows our discount, and the second tells us how much of the original price we're paying.**
8. If Aidan buys 5 guinea pigs at 20% off and each pig costs  $g$  dollars, what's an expression that shows his total cost? **Aidan is paying  $5g - 0.2(5g)$ , or  $4g$ .**
9. Are the three expressions  $12x - 0.6(x - 24)$ ,  $-36 - (2x - 21.6) + 13.4x$ , and  $11.4x - 14.4$  all equivalent? **Yep, they sure are.**
10. Doug's Dungarees has a 5% off sale on jeans this weekend. Caitlin buys 20 pairs at  $j$  dollars apiece. Is this the same discount as buying 19 pairs and getting one extra pair for free? **Yes, it's the same discount:  $20j - 0.05(20j) = 19j$ .**