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## HAIRY VARIABLES

- 1. EXAMPLES:
- 2. For problems 1 to 6, fill in the circle of the correct answer.
- 3. For problems 7 to 11, write in the correct answer.
- 4. <u>ANSWER KEY</u>

#### solving for variables STUDY TIP: SOLVING FOR A VARIABLE

- · Do the inverse (opposite) operation.
- · If you're solving a two-step equation, first undo the addition or subtraction.

Then undo the multiplication or division.

#### **EXAMPLES**:

```
d + 12 = 20
Undo + 12 with - 12
d = 20 - 12
d = 8

5r-3 = 17
Undo - 3 with + 3
5r = 17 + 3
5r = 20
Then undo x 5 with / 5
r = 20 /5
r = 4
```

# For problems 1 to 6, fill in the circle of the correct answer.

1. You're a well-known and highly-paid hair stylist. Say the variable a represents the hair length of one of your customers, Izzy Goinbald. To find out how long Izzy's hair is after you cut off 5 inches, which expression could you evaluate?

```
A a + 5

B a - 5

C 5 - a

D a x 5

2. "Hair" you go, another problem: If m = 5, what is the value of 3m + 2?

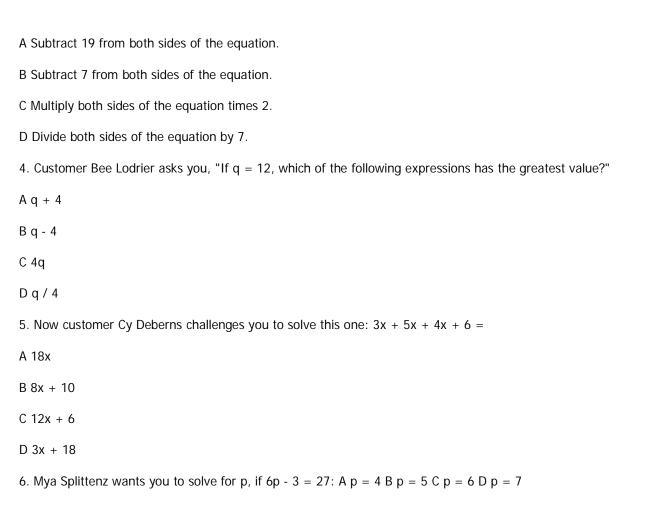
A 15

B 17

C 25

D 37
```

3. "Brush" up on your variable skills for this one: To solve 2x + 7 = 19, what should you do first?



## For problems 7 to 11, write in the correct answer.

- 7. Quinn Tupletz brings his 5 identical sons in for identical haircuts. Say x represents the cost of each haircut. Use the variable to write an equation showing that Quinn spent a total of \$86 on the haircuts.
- 8. In the middle of his haircut, Quinn's son Tippy Tupletz asks you, "If x = 7 and y = 4, what is the value of..."
- a. 3x + y?
- b. 5x 8y?
  - 9. Di Myair wants you to shave this expression in her hair: 12d + 7d + 5 3d + 2d. But there's not enough room! What's a simpler way to write that expression?
  - 10. You can't undo a bad haircut, but you can undo a math operation. Say you wanted to use inverse operations to solve for w in this equation:
  - $\cdot$  8w+9=41
- a. Which part of the equation should you undo first?
- b. What is the value of w?
- 11. Pam Purm purchases 3 hair clips on Friday. She buys 4 more on Saturday, and another 6 on Sunday. (It was a bad perm!) The clips each cost the same price. The total cost of the hair clips was \$16.90.
- a. Write an equation you could use to find the cost of one hair clip:
- b. How much does one clip cost?
- So, you think you're the consummate consumer, a shrewd shopper, a bargain buyer? Show us your savvy shopping skills by taking this test on shopping math. Ka-ching!

### **ANSWER KEY**

- 1. b
- 2. b
- 3. b
- **4**. c
- **5**. c
- **6**. b
- 7. 5x = \$86
- 8. a. 25
- b. 3
  - · 9. 18d + 5
  - · 10a. + 9
- b. 4
- 11a. 13x = \$16.90 or 3x + 4x + 6x = \$16.90
- b. \$1.30

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