

Lesson 1.4 - Modeling Linear Equations

1. Karens's brother is six years less than twice Karens's age, x . The sum of Karen's age and her brother's age is 50. Write equation represents this relationship.
2. An Internet company charges \$70.00 a month for up to 3 gigabytes of data. The cost of additional data is \$0.20 per megabyte. If d represents the number of additional megabytes used and c represents the total charges at the end of the month, write a linear equation that can be used to determine a user's monthly bill.
3. Emily has quarters and dimes in her wallet totaling \$3.20. The number of dimes she has is 4 more than three times the number of quarters, q . Which equation could be used to find the number of quarters she has?

1) $0.25q + 0.10(3q + 4) = 3.20$

2) $0.25(3q + 4) + 0.10q = 3.20$

3) $q + (3q + 4) = 3.20$

4) $(q - 4) + 3q = 3.20$