## Lesson 8 Practice Problems

1. a. Draw a diagram of $x+3$ and a diagram of $2 x$ when $x$ is 1 .

b. Draw a diagram of $x+3$ and of $2 x$ when $x$ is 2 .

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c. Draw a diagram of $x+3$ and of $2 x$ when $x$ is 3 .

d. Draw a diagram of $x+3$ and of $2 x$ when $x$ is 4 .

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e. When are $x+3$ and $2 x$ equal? When are they not equal? Use your diagrams to explain.
2. a. Do $4 x$ and $15+x$ have the same value when $x$ is 5 ?
b. Are $4 x$ and $15+x$ equivalent expressions? Explain your reasoning.
3. $a$. Check that $2 b+b$ and $3 b$ have the same value when $b$ is 1,2 , and 3 .
b. Do $2 b+b$ and $3 b$ have the same value for all values of $b$ ? Explain your reasoning.
c. Are $2 b+b$ and $3 b$ equivalent expressions?
4. $80 \%$ of $x$ is equal to 100 .
a. Write an equation that shows the relationship of $80 \%, x$, and 100 .
b. Use your equation to find $x$.
(From Unit 6, Lesson 7.)
5. For each story problem, write an equation to represent the problem and then solve the equation. Be sure to explain the meaning of any variables you use.
a. Jada's dog was $5 \frac{1}{2}$ inches tall when it was a puppy. Now her dog is $14 \frac{1}{2}$ inches taller than that. How tall is Jada's dog now?
b. Lin picked $9 \frac{3}{4}$ pounds of apples, which was 3 times the weight of the apples Andre picked. How many pounds of apples did Andre pick?
(From Unit 6, Lesson 5.)

6 . Find these products.
a. $(2.3) \cdot(1.4)$
b. (1.72) • (2.6)
c. $(18.2) \cdot(0.2)$
d. $15 \cdot(1.2)$
(From Unit 5, Lesson 8.)
7. Calculate $141.75 \div 2.5$ using a method of your choice. Show or explain your reasoning.
(From Unit 5, Lesson 13.)

