### Lesson 9 Practice Problems

1. Select **all** the expressions that represent the area of the large, outer rectangle.
* 
	1. $5\left(2+4\right)$
	2. $5⋅2+4$
	3. $5⋅2+5⋅4$
	4. $5⋅2⋅4$
	5. $5+2+4$
	6. $5⋅6$
1. Draw and label diagrams that show these two methods for calculating $19⋅50$.
	* First find $10⋅50$ and then add $9⋅50$.
	* First find $20⋅50$ and then take away 50.
2. Complete each calculation using the distributive property.
* $98⋅24$ $\left(100−2\right)⋅24$ $…$
* $21⋅15$ $\left(20+1\right)⋅15$ $…$
* $0.51⋅40$ $\left(0.5+0.01\right)⋅40$ $…$
1. A group of 8 friends go to the movies. A bag of popcorn costs $2.99. How much will it cost to get one bag of popcorn for each friend? Explain how you can calculate this amount mentally.
	1. On graph paper, draw diagrams of $a+a+a+a$ and $4a$ when $a$ is 1, 2, and 3. What do you notice?
	2. Do $a+a+a+a$ and $4a$ have the same value for any value of $a$? Explain how you know.
* (From Unit 4, Lesson 8.)
1. 120% of $x$ is equal to 78.
	1. Write an equation that shows the relationship of 120%, $x$, and 78.
	2. Use your equation to find $x$. Show your reasoning.
* (From Unit 4, Lesson 7.)
1. Kiran’s aunt is 17 years older than Kiran.
	1. How old will Kiran’s aunt be when Kiran is:
	* 15 years old?
	* 30 years old?
	* $x$ years old?
	1. How old will Kiran be when his aunt is 60 years old?
* (From Unit 4, Lesson 6.)



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