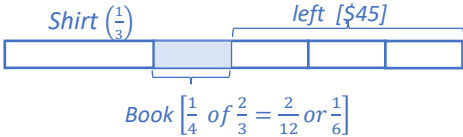




Savings and Allowances

Kinder & First Grade: solve at least 3 problems.
Second & Third Grade: solve at least 7 problems.
Fourth Grade and above: solve at least 12 problems.

		<i>Answer</i>
1.	Lloyd saves \$2 each week. How much money will he save after 5 weeks? $\$2 + \$2 + \$2 + \$2 + \$2 = \mathbf{\$10}$	$\$10$ or $\$10.00$
2.	Leena has \$10. She earns \$2 each week by doing chores. How much will Leena have after 3 weeks if she does not spend any of her money? $\$10 + \$2 + \$2 + \$2 = \mathbf{\$16}$	$\$16$ or $\$16.00$
3.	Sam gets \$5 every week as an allowance. Each week, he plans to spend \$2 and save the rest. How much money does he save in 4 weeks? Sam saves $\$5 - \$2 = 3$ every week. In four weeks, he saves $\$3 + \$3 + \$3 + \$3 = \mathbf{\$12}$	$\$12$ or $\$12.00$
4.	A dime is worth 10 cents. A nickel is worth 5 cents. Noah has 5 dimes and 5 nickels in his piggy bank. How much money does Noah have in total? 5 dimes = \$0.50 or 50 cents 5 nickels = \$0.25 or 25 cents Total = $\mathbf{\$0.75}$ or $\mathbf{75}$ cents	75 cents or $\$0.75$
5.	Every week she gets $\$5 + \$8 = \$13$. We can keep adding $\$13 + 13 + 13 + \dots + \13 until we get at least \$50. Adding \$13 four times (or $\$13 \times 4$), we get \$52. She reaches \$50 after $\mathbf{4}$ weeks (with \$2 left).	4 [weeks]
6.	In her piggy bank, there must be 1 penny, 2 quarters and 3 dimes (total of 6 coins). $1\text{¢} + 25\text{¢} + 25\text{¢} + 10\text{¢} + 10\text{¢} + 10\text{¢} = \mathbf{81\text{¢}}$ or $\mathbf{\$0.81}$	81 cents or $\$0.81$
7.	a. In 10 weeks, there are only 2 cycles of 4 weeks, so she is getting the extra \$20 twice only. Savings after 10 weeks: $(\$15 \times 10) + (\$20 \times 2) = \$150 + \$40 = \$190$ b. Money needed: $\$250 - \$190 = \mathbf{\$60.00}$ (Sophia still needs \$60.)	a. $\mathbf{\$190}$ [saved] b. No or not enough, \$60 or \$60.00 [needed]
8.	<i>One way:</i> In 6 weeks, Jenna earns $\$50 \times 6 = \300 . Half of the earnings = $\$300 \div 2 = \150 . In 6 weeks, she saves \$150. Three-fifths of what's left = $\frac{3}{5} \times \$150 = \90 . In 6 weeks, she spends \$90. Donate to charity = $\$300 - \$150 - \$90 = \60 . <i>Another way:</i> Weekly donation to charity = $\$50 - \$25 - \$15 = \10 . In 6 weeks, she donates $\$10 \times 6 = \mathbf{\$60}$. <i>Another way:</i> $\frac{1}{2} + \frac{3}{5} \cdot \frac{1}{2} = \frac{8}{10}$ saved or spent. $1 - \frac{8}{10} = \frac{2}{10} = \frac{1}{5}$ donated In 6 weeks, she will donate $6 \cdot \$50 \cdot \frac{1}{5} = \mathbf{\$60}$	$\$60$ or $\$60.00$

9.	Weekly savings: $\$12 + \$8 = \$20$ Weeks to save $\$300$: $\$300 \div \$20 = \mathbf{15 \text{ weeks}}$	<i>15 [weeks]</i>
10.	Total hours needed = $\$360 \div \$12 = 30 \text{ hours}$. Weeks required = $30 \text{ hours} \div 5 \text{ hours/week} = \mathbf{6 \text{ weeks}}$.	<i>6 [weeks]</i>
11.	<p>a. Ava and Noah</p> <p>b. $\\$320.00$</p> <p>Ava's Savings: Ava saves $\\$15$ every week. Savings after 8 weeks: $15 \times 8 = \\$120.00$</p> <p>Ben's Savings: Ben spends $\\$15$ each week, so he saves: $25 - 15 = \\$10.00$ per week. Savings after 8 weeks: $10 \times 8 = \\$80.00$.</p> <p>Noah's Savings: Noah saves 60% of his allowance each week: $25 \times 0.6 = \\$15.00$ Savings after 8 weeks: $15 \times 8 = \\$120.00$. Altogether: $\\$120 + \\$80 + \\$120 = \mathbf{\\$320.00}$</p>	<p><i>a. Ava and Noah</i></p> <p><i>b. $\\$320$ or $\\$320.00$</i></p>
12.	To avoid fraction, let's assume that she bought and sold 12 candy bars. The 12 candy bars cost $3 \times \$5$ or $\$15.00$. The 12 candy bars sold for $4 \times \$5$ or $\$20.00$. Profit in this case: $\$20.00 - \$15.00 = \$5.00$ Since Kamilla made a profit of $\$50.00$ which is 10 times the scenario above, she must have sold 12×10 or 120 candy bars .	<i>120 [candy bars]</i>
13.	<p>Book: a quarter of what's left = $\frac{1}{4}$ of $(1 - \frac{1}{3}) = \frac{1}{4}$ of $\frac{2}{3} = \frac{1}{6}$.</p>  <p>The fraction of what's left = $1 - \frac{1}{3} - \frac{1}{6} = \frac{1}{2}$ Since the fraction $\frac{1}{2}$ represents $\\$45$, the original amount must be $\\$90$.</p>	<i>$\\$90$ or $\\$90.00$</i>
14.	Weekly net change: $\$8 - \$12 = -\$4$ (Jack loses $\$4$ each week). After 8 weeks: $\$100 - (8 \times \$4) = \$100 - \$32 = \$68$. To have at least $\$50$: $\$100 - (\$4 \times \text{weeks}) \geq \$50 \rightarrow \$4 \times \text{weeks} \leq \$50 \rightarrow \text{weeks} \leq 12.5$ (Jack can continue for 12 weeks .)	<i>12 [weeks]</i>
15.	Deal 1: 25% of $\$120 = \$120 \times 0.25 = \$30$ discount. Final price = $\$120 - \$30 = \$90.00$ Deal 2: 15% of $\$120 = \$120 \times 0.15 = \$18$ discount. Remaining price = $\$120 - \$18 = \$102.00$ Additional $\$10$ off = $\$102 - \$10 = \$92.00$. Deal 1 is better (saves $\$30$ vs. $\$28$).	<i>Deal 1</i>
16.	The number of hours he worked = $\$1152 \div 12 = 96 \text{ hours}$. February has 28 or 29 days in total. If we subtract 4 Sundays, we'll get 24 or 25 working days. Possible number of hours that he worked each day: 3 hours or 4 hours. If 3 hours for 24 days, total hours worked: $3 \times 24 \text{ days} = 72 \text{ hours}$; if 4 hours for 24 days = 96 hours. Only 4 hours for 24 fit the conditions.	<i>4 [hours]</i>
17.	Option A: $1,000 \times (1 + 0.02) = 1,000.00 \times 1.02 = \$1,020.00$. Option B: $1,000 \times (1 + 0.015) + 10 = 1,000 \times 1.015 + 10 = \$1,025.00$ Option B gives $\$5$ more money after 1 year.	<i>Option B</i>
18.	<p>a. Interest in one year: $\\$5000.00 \times 0.05 = \\250. Total money after one year: $\\$5000.00 + \\$250.00 = \mathbf{\\$5250.00}$</p> <p>b. After 1 year, interest earned: $\\$250.00$. Total money: $\\$5000.00 + \\$250.00 = \\$5250.00$ After 2 years: $\\$5250 \times 0.05 = \\262.50. Total money: $\\$5250.00 + \\$262.50 = \\$5512.50$ After 3 years: $\\$5512.50 \times 0.05 = \\275.625. Total money: $\\$5512.50 + \\$275.625 = \mathbf{\\$5788.125}$ \rightarrow rounded to $\\$5788$</p>	<p><i>a. $\\$5250$</i></p> <p><i>b. $\\$5788$ or $\\$5788.00$</i></p>

Solution available on March 7, 2025

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