Math
Released Item 2019

Grade 5

Haley Babysits After School
M03555

Anchor Set
A1 – A8

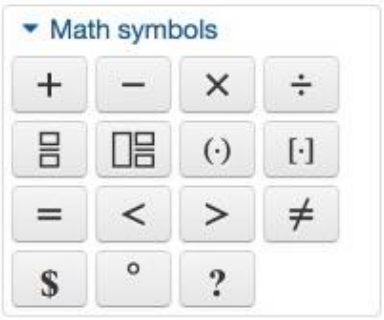
With Annotations

Prompt

Haley babysits after school 5 days a week Monday through Friday. She earns $9 for each hour she babysits. Haley babysits for 2 hours each day on Monday, Tuesday, and Wednesday. She babysits for $2\frac{1}{2}$ hours each day on Thursday and Friday. Haley saves $\frac{2}{3}$ of the money she earns each week.

- How much money will Haley save from babysitting in one week?
- Show your work.
- Include the equation or equations used to solve the problem.

Enter your answer, your equation or equations, and your work or explanation in the space provided.



M03555 Rubric	
Score	**Description**

3	Student response includes the following 3 elements.
	• **Computation component** = 1 point
	  ○ Correct amount of money saved, $66
	• **Modeling component** = 1 point
	  ○ Valid work shown
	• **Modeling component** = 1 point
	  ○ Valid equation or equations
	
	Sample Student Response:
	
	Haley worked a total of 6 hours on Monday, Tuesday, and Wednesday since she worked 2 hours on each of 3 days. Haley worked a total of 5 hours on Thursday and Friday since she worked 2 ½ hours on each of 2 days.
	I can use the following equation to determine 11 for the total number of hours she worked in a week.
	
	(3 x 2) + (2 x 2 ½)
	6 + 5 = 11
	Haley earned $99 for the week since I can multiply 11 hours by her hourly wage of $9.
	11 x 9 = 99
	
	Haley saved $66 since she saves 2/3 of her earnings and I can multiple 2/3 by $99 to find the amount saved.
	99 x 2/3 = 66
	
	Note: explanation is not required
	
	Or other valid response.

2	Student response includes 2 of the 3 elements.
1	Student response includes 1 of the 3 elements.
0	Student response is incorrect or irrelevant.

A1

Score Point 3

Haley babysits after school 5 days a week Monday through Friday. She earns $9 for each hour she babysits. Haley babysits for 2 hours each day on Monday, Tuesday, and Wednesday. She babysits for $2\frac{1}{2}$ hours each day on Thursday and Friday. Haley saves $\frac{2}{3}$ of the money she earns each week.

- How much money will Haley save from babysitting in one week?
- Show your work.
- Include the equation or equations used to solve the problem.

Enter your answer, your equation or equations, and your work or explanation in the space provided.

66 dollars

$2 + 2 + 2 = 6$

$2\frac{1}{2} + 2\frac{1}{2} = 5$

$6 + 5 = 11$

$11 \times 9 = 99$

$99 \div 3 = 33$

$33 \times 2 = \$66.00$

Annotation

Anchor Paper 1
Score Point 3

This response receives full credit. It includes each of the three required elements:

- The correct amount of money Haley will save from babysitting in one week is found (66 dollars).

- Valid work is shown (2 + 2 + 2 = 6; $2\frac{1}{2} + 2\frac{1}{2} = 5$; 6 + 5 = 11; 11 × 9 = 99; 99 ÷ 3 = 33; 33 × 2 = $66.00). The hours for each day (Mon – Fri) are added. The total hours are multiplied by the hourly rate to find the total amount earned during the week. Finally, the earnings are multiplied by $\frac{2}{3}$ to determine the amount saved. The student shows all the steps of the process to determine the amount saved.

- Valid equations used to solve the problem are shown (2 + 2 + 2 = 6; $2\frac{1}{2} + 2\frac{1}{2} = 5$; 6 + 5 = 11; 11 × 9 = 99; 99 ÷ 3 = 33; 33 × 2 = $66.00).

A2

Score Point 3

Haley babysits after school 5 days a week Monday through Friday. She earns $9 for each hour she babysits. Haley babysits for 2 hours each day on Monday, Tuesday, and Wednesday. She babysits for $2\frac{1}{2}$ hours each day on Thursday and Friday. Haley saves $\frac{2}{3}$ of the money she earns each week.

- How much money will Haley save from babysitting in one week?
- Show your work.
- Include the equation or equations used to solve the problem.

Enter your answer, your equation or equations, and your work or explanation in the space provided.

She will save $\$66$ in one week.I'll show you how I got that.

Work: $6 \times 9 = 54$
$2\frac{1}{2} + 2\frac{1}{2} = 5$
$5 \times 9 = 45$
$54 + 45 = 99$
$99 \div 3 = 33$
$33 \times 2 = \$66$

This is really did was a lot of equations to get to $\frac{2}{3}$ of 99.

Annotation

Anchor Paper 2
Score Point 3

This response receives full credit. It includes each of the three required elements:

- The correct amount of money Haley will save from babysitting in one week is found ($66).
- Valid work is shown (Work: 6 X 9 = 54; 2 ½ + 2 ½ = 5; 5 X 9 = 45; 54 + 45 = 99; 99 ÷ 3 = 33; 33 X 2 = $66). The total hours are multiplied by the hourly rate to find the total amount earned during the week. Finally, the earnings are multiplied by $\frac{2}{3}$ to determine the amount saved. It is not necessary to provide work showing the addition of hours worked on Monday-Wednesday; 2+2+2 to find 6 hours is considered mental math.
- Valid equations used to solve the problem are shown (6 x 9 = 54; 2 ½ + 2 ½ = 5; 5 x 9 = 45; 54 + 45 = 99; 99 ÷ 3 = 33; 33 X 2 = $66).

A3

Score Point 2

Haley babysits after school 5 days a week Monday through Friday. She earns $9 for each hour she babysits. Haley babysits for 2 hours each day on Monday, Tuesday, and Wednesday. She babysits for $2\frac{1}{2}$ hours each day on Thursday and Friday. Haley saves $\frac{2}{3}$ of the money she earns each week.

- How much money will Haley save from babysitting in one week?
- Show your work.
- Include the equation or equations used to solve the problem.

Enter your answer, your equation or equations, and your work or explanation in the space provided.

First, I added up the hours of baby sitting on Monday, Tuesday, and Wednesday. I got a total of 6 hours. I multiplied that by 9, the number of dollars she got per hour to get $\$54$. Then, I did the equasion $\$54 \div 3$ and got 18. I multiplied that by 2 to see what she saaed from Monday, Tuesday, and Wednesday. On those three days she earned $\$36$.

Then I added $2\frac{1}{2}$ to another $2\frac{1}{2}$ and got 5 hours on Thursday and Friday. I multiplied it by 9 and got $\$45$ earned on those days. Next, I divided that by 3 to get 15, and multiplied that by 2 to get $\$30$ saved in those days. Finally, I added The $\$36$ earned on Monday, Tuesday, and Wednesday plus the $\$30$ earned on Tuesday and got a grand total of $66 saved per week.

Annotation

Anchor Paper 3
Score Point 2

This response receives partial credit. It includes two of the three required elements:

- The correct amount of money Haley will save from babysitting in one week is found ($66).

- Valid work is shown (First, I added up the hours of baby sitting on Monday, Tuesday, and Wednesday. I got a total of 6 hours. I multiplied that by 9, the number of dollars she got per hour to get $54. Then, I did the equasion $54 ÷ 3 and got 18. I multiplied that by 2 to see what she saaed from Monday, Tuesday, and Wednesday. On those three days she earned $36. Then I added $2\frac{1}{2}$ to another $2\frac{1}{2}$ and got 5 hours on Thursday and Friday. I multiplied it by 9 and got $45 earned on those days. Next, I divided that by 3 to get 15, and multiplied that by 2 to get $30 saved in those days. Finally, I added The $36 earned on Monday, Tuesday, and Wednesday plus the $30 earned on Tuesday and got a grand total of $66 saved per week).

No valid equations are provided ($54 ÷ 3 and got 18, added $2\frac{1}{2}$ to another $2\frac{1}{2}$ and got 5). The equations do not use valid operational language.

A4

Score Point 2

Haley babysits after school 5 days a week Monday through Friday. She earns $9 for each hour she babysits. Haley babysits for 2 hours each day on Monday, Tuesday, and Wednesday. She babysits for $2\frac{1}{2}$ hours each day on Thursday and Friday. Haley saves $\frac{2}{3}$ of the money she earns each week.

- How much money will Haley save from babysitting in one week?
- Show your work.
- Include the equation or equations used to solve the problem.

Enter your answer, your equation or equations, and your work or explanation in the space provided.

Haley has $\$99$ dollors in one week.

Mon thru Wed she works 6 hours and
$\$9 \times 6hours = \$54$
Thurs thru Fri she works 5 hours and
$\$9 \times 5hours = \$45$

All together in 1 week she has $99 because
$\$54 + \$45 = \$99$

Annotation

Anchor Paper 4
Score Point 2

This response receives partial credit. It includes two of the three required elements:

- Valid work is shown (Mon thru Wed she works 6 hours and $9 X 6hours = $54; Thurs thru Fri she works 5 hours and $9 X 5hours = $45; All together in 1 week she has $99 because $54 + $45 = $99). Note that adding the hours worked each day is considered mental math and it is not necessary to show the work to find those totals. The student finds total earnings and shows the relevant and correct work to determine it. The work demonstrates a correct strategy to solve the problem. While the last step of finding the amount saved is not completed, a deduction is taken for not providing the correct amount saved in element 1.

- Valid equations used to solve the problem are shown ($9 X 6hours = $54; $9 X 5hours = $45; $54 + $45 = $99).

An incorrect answer ($99) is provided and the response does not receive credit for the first element. The student stops the solution after finding the weekly total and does not attempt to find the amount saved per week.

A5

Score Point 1

Haley babysits after school 5 days a week Monday through Friday. She earns $9 for each hour she babysits. Haley babysits for 2 hours each day on Monday, Tuesday, and Wednesday. She babysits for $2\ \frac{1}{2}$ hours each day on Thursday and Friday. Haley saves $\frac{2}{3}$ of the money she earns each week.

- How much money will Haley save from babysitting in one week?
- Show your work.
- Include the equation or equations used to solve the problem.

Enter your answer, your equation or equations, and your work or explanation in the space provided.

Haley will save $\$33$ a week. She makes $\$54$ on Monday Tuesday and Wednesday $+45$ on Thursday and Friday. Haley makes $\$99$ a week. $99 \div 3 = 33$ thats $\frac{1}{3}$ of 99 so $\frac{2}{3}$ of 99 would be 66 $+33 = 99$ so she saves $\$33$ a week

Annotation

Anchor Paper 5
Score Point 1

This response receives partial credit. It includes one of the three required elements:

- Valid equations used to solve the problem are shown ($99 \div 3 = 33$, $66 + 33 = 99$).

The response does not receive credit for finding how much money Haley will save from babysitting in one week. The answer provided ($33) is incorrect.

The response does not receive credit for showing valid work. Although the amount earned in the week $99 is correctly determined ($54 on Monday Tuesday and Wednesday +45 on Thursday and Friday. Haley makes $99 a week), no work is shown for how these amounts of money earned were determined. Hence, the work shown is insufficient.

A6

Score Point 1

Haley babysits after school 5 days a week Monday through Friday. She earns $9 for each hour she babysits. Haley babysits for 2 hours each day on Monday, Tuesday, and Wednesday. She babysits for $2\ \frac{1}{2}$ hours each day on Thursday and Friday. Haley saves $\frac{2}{3}$ of the money she earns each week.

- How much money will Haley save from babysitting in one week?
- Show your work.
- Include the equation or equations used to solve the problem.

Enter your answer, your equation or equations, and your work or explanation in the space provided.

She will save 66 dollers each week.

$\frac{2}{3} = 66$

Cause $\frac{2}{6}$ is 66%.

Annotation

Anchor Paper 6
Score Point 1

This response receives partial credit. It includes one of the three required elements:

- The correct amount of money Haley will save from babysitting in one week is found (She will save 66 dollers each week).

The response does not receive credit for work shown ($\frac{2}{3} = 66$) is not sufficient work to show how the final answer of $66 was found.

The response does not receive credit for including equations used to solve the problem ($\frac{2}{3} = 66$) is not a valid equation used to solve the problem.

A7

Score Point 0

Haley babysits after school 5 days a week Monday through Friday. She earns $9 for each hour she babysits. Haley babysits for 2 hours each day on Monday, Tuesday, and Wednesday. She babysits for $2\frac{1}{2}$ hours each day on Thursday and Friday. Haley saves $\frac{2}{3}$ of the money she earns each week.

- How much money will Haley save from babysitting in one week?
- Show your work.
- Include the equation or equations used to solve the problem.

Enter your answer, your equation or equations, and your work or explanation in the space provided.

$7 \times 9 = 63$ she will have $63 in one week

Annotation

Anchor Paper 7
Score Point 0

This response receives no credit. It includes none of the three required elements:

The response does not receive credit for finding how much money Haley will save from babysitting in one week. The answer provided ($63) is not correct.

The response does not receive credit for showing work. It provides a true statement (7 x 9 = 63) but it is not relevant to solving the problem.

The response does not receive credit for including equations used to solve the problem. It provides a valid equation (7 x 9 = 63) but it is not relevant to solving the problem.

A8

Score Point 0

Haley babysits after school 5 days a week Monday through Friday. She earns $9 for each hour she babysits. Haley babysits for 2 hours each day on Monday, Tuesday, and Wednesday. She babysits for $2\ \frac{1}{2}$ hours each day on Thursday and Friday. Haley saves $\frac{2}{3}$ of the money she earns each week.

- How much money will Haley save from babysitting in one week?
- Show your work.
- Include the equation or equations used to solve the problem.

Enter your answer, your equation or equations, and your work or explanation in the space provided.

Haley saves $\$30$ a week beacuse each week she gets paid $\$90$ $\frac{1}{3}$ of that is 30 because $30 + 30 + 30 = 90$

Annotation

Anchor Paper 8
Score Point 0

This response receives no credit. It includes none of the three required elements:

The response does not receive credit for finding how much money Haley will save from babysitting in one week. The answer provided is incorrect ($30).

The response does not receive credit for showing work. It provides some correct work which correctly finds one third of 90 (she gets paid \$90 $\frac{1}{3}$ of that is 30 because 30 + 30 + 30 = 90), but does not show how the $90 is found. Work shown attempts to find the amount saved, but fails to recognize that 2/3 of the total needs to be saved, not 1/3 (saves $30 week).

The response does not receive credit for including equations used to solve the problem. It provides a valid equation that could be used to solve the problem (30 + 30 + 30 = 90), but the student does not provide any additional equation to demonstrate saving 2/3 of the total 90 dollars earned.

Practice Set
P1 - P5

No Annotations Included

Haley babysits after school 5 days a week Monday through Friday. She earns $9 for each hour she babysits. Haley babysits for 2 hours each day on Monday, Tuesday, and Wednesday. She babysits for $2\frac{1}{2}$ hours each day on Thursday and Friday. Haley saves $\frac{2}{3}$ of the money she earns each week.

- How much money will Haley save from babysitting in one week?
- Show your work.
- Include the equation or equations used to solve the problem.

Enter your answer, your equation or equations, and your work or explanation in the space provided.

she will save 66 dollars each week
$2+2+2+2\frac{1}{2}+2\frac{1}{2}$ hours equals 11 hours, she earns $\$9$ each hour $\$9 \times 11hours = 99$ dollars. $\$66$ is $\frac{2}{3}$ of $\$99$, so she will save $\$66$ each week

Haley babysits after school 5 days a week Monday through Friday. She earns $9 for each hour she babysits. Haley babysits for 2 hours each day on Monday, Tuesday, and Wednesday. She babysits for $2\ \frac{1}{2}$ hours each day on Thursday and Friday. Haley saves $\frac{2}{3}$ of the money she earns each week.

- How much money will Haley save from babysitting in one week?
- Show your work.
- Include the equation or equations used to solve the problem.

Enter your answer, your equation or equations, and your work or explanation in the space provided.

if she gets $18 for two hours that means monday, tuesday and wednesday she would get $54 dollars because $18 \times 3 = 54$ .On thursday and friday she will still get $18 dollars but $9 dollars with it . so thursday and friday would be $18 + 18 = 36$. 36 $+18 = 54$. so 54 $+54 = 99$. so haley saves about 66 dollars a week.

Haley babysits after school 5 days a week Monday through Friday. She earns $9 for each hour she babysits. Haley babysits for 2 hours each day on Monday, Tuesday, and Wednesday. She babysits for $2\frac{1}{2}$ hours each day on Thursday and Friday. Haley saves $\frac{2}{3}$ of the money she earns each week.

- How much money will Haley save from babysitting in one week?
- Show your work.
- Include the equation or equations used to solve the problem.

Enter your answer, your equation or equations, and your work or explanation in the space provided.

$$9.00 \times 2 \times 3 = 54.00$$
$$9.50 \times 2 = 19.00$$
$$19.00 + 54.00 = 73.00$$
$$73.00 - \frac{2}{3} = 41.30$$

Haley babysits after school 5 days a week Monday through Friday. She earns $9 for each hour she babysits. Haley babysits for 2 hours each day on Monday, Tuesday, and Wednesday. She babysits for $2\frac{1}{2}$ hours each day on Thursday and Friday. Haley saves $\frac{2}{3}$ of the money she earns each week.

- How much money will Haley save from babysitting in one week?
- Show your work.
- Include the equation or equations used to solve the problem.

Enter your answer, your equation or equations, and your work or explanation in the space provided.

Haley will save $\$48$ from babysitting in one week.

$\$18 \times 3 = \$54$

$\$54 + \$18 = \$72$

$\frac{2}{3} \times \$72 = \frac{144}{3} = \$48$

Haley babysits after school 5 days a week Monday through Friday. She earns $9 for each hour she babysits. Haley babysits for 2 hours each day on Monday, Tuesday, and Wednesday. She babysits for $2\frac{1}{2}$ hours each day on Thursday and Friday. Haley saves $\frac{2}{3}$ of the money she earns each week.

- How much money will Haley save from babysitting in one week?
- Show your work.
- Include the equation or equations used to solve the problem.

Enter your answer, your equation or equations, and your work or explanation in the space provided.

$\$9 \times 2 = \$18$
$\$18 \times 3 = \$54$
$\$9 \times 2\frac{1}{2} = \$22.50$
So she has $\$22.50$ in a week.
$2250 \div 3 = \$75.00$
So she gives $\$3.75$
$\$75.00 \div 2 = \$3.75$ So the answere is $\$3.75$

Practice Set

Paper	Score
P1	3
P2	2
P3	1
P4	2
P5	1