Name: _____

PRACTICE TUTORIAL

Practice & Problem Solving

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Leveled Practice **In 15–22, solve each equation.**

15. $w - 3.2 = 5.6$

$w - 3.2 + \square = 5.6 + \square$

$w = \square$

16. $9.6 = 1.6y$

$9.6 \div \square = 1.6y \div \square$

$\square = y$

17. $48.55 + k = 61.77$

$48.55 + k - \square = 61.77 - \square$

$k = \square$

18. $m \div 3.54 = 1.5$

$m \div 3.54 \times \square = 1.5 \times \square$

$m = \square$

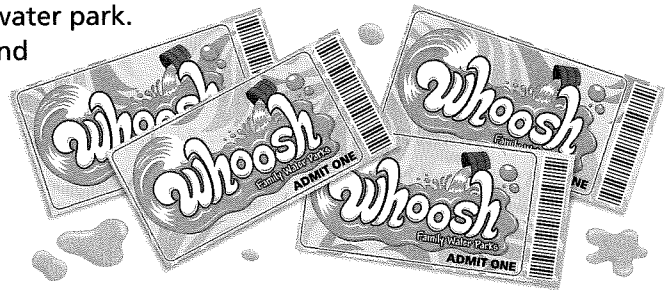
19. $7\frac{1}{9} = 2\frac{4}{5} + m$

20. $a + 3\frac{1}{4} = 5\frac{2}{9}$

21. $\frac{1}{8} \cdot y = 4$

22. $k - 6\frac{3}{8} = 4\frac{6}{7}$

23. Mr. Marlon buys these tickets for his family to visit the water park. The total cost is $210. Write and solve an equation to find the cost of each ticket.

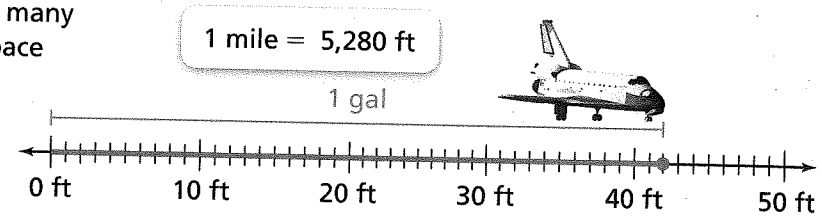


24. Higher Order Thinking Without solving, tell which equation below has a greater solution. Explain.

$\frac{5}{8}m = 2\frac{3}{4}$ $\frac{5}{9}m = 2\frac{3}{4}$

25. Make Sense and Persevere A high school track team's long jump record is 21 feet $2\frac{1}{4}$ inches. This year, Tim's best long jump is 20 feet $9\frac{1}{2}$ inches. If long jumps are measured to the nearest quarter inch, how much farther must Tim jump to break the record?

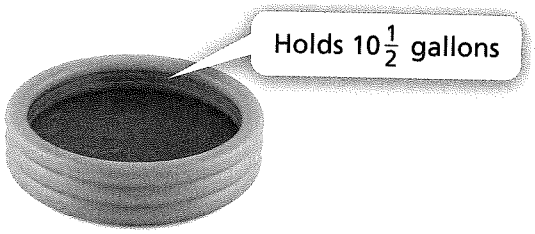
26. Make Sense and Persevere About how many gallons of fuel does it take to move the space shuttle 3 miles from its hangar to the Vehicle Assembly Building?



27. Is the solution of $b \times \frac{5}{6} = 25$ greater than or less than 25? How can you tell before computing?

28. What is the width of a rectangle with a length of $\frac{3}{7}$ ft and an area of 2 ft^2? Write an equation to show your work.

29. Model with Math Helen is filling the pool shown for her little brother. She can carry $1\frac{7}{8}$ gallons of water each trip. Write and solve an equation to find how many trips Helen needs to make.

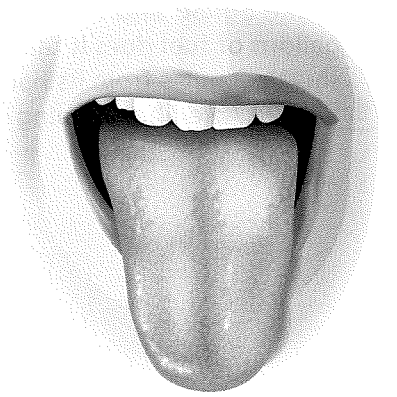


30. After the pool was full, Helen's little brother and his friend splashed g gallons of water out of the pool. There are $7\frac{7}{8}$ gallons still left in the pool. Write and solve an equation to find how much water was splashed out of the pool.

31. Grace solved the equation $2\frac{1}{2}y = \frac{5}{8}$. Her steps for the solution are shown in the table but are all mixed up. Write her steps in the correct order on the right side of the table.

Scrambled Steps	Solution Steps in Order
$2\frac{1}{2}y = \frac{5}{8}$	
$y = \frac{10}{40}$ or $\frac{1}{4}$	
$\frac{5}{2}y = \frac{5}{8}$	
$y = \frac{5}{8} \cdot \frac{2}{5}$	

32. The scientific name for the little bumps on your tongue is *fungiform papillae*. Each bump can contain many taste buds. The number of taste buds a person has varies. There are three general classifications of taste: supertaster, medium taster, and nontaster. Suppose a supertaster has 8,640 taste buds. Solve the equation $4.5n = 8{,}640$ to find the number of taste buds, n, a nontaster may have.



A supertaster may have 4.5 times as many taste buds as a nontaster.

33. Model with Math In one study, the number of women classified as supertasters was 2.25 times the number of men classified as supertasters. Suppose 72 women were classified as supertasters. Write an equation that represents the number of men, m, who were classified as supertasters. Then solve the equation. How many men were classified as supertasters?

34. Use Structure A fraction, f, multiplied by 5 equals $\frac{1}{8}$. Write an algebraic sentence to show the equation. Then solve the equation and explain how you solved it.

35. Yelena needs to swim a total of 8 miles this week. So far, she swam $5\frac{3}{8}$ miles. Use the equation $5\frac{3}{8} + m = 8$ to find how many more miles Yelena needs to swim.

36. Can any equation that is written using addition be written as an equivalent equation using subtraction? Explain your reasoning and give an example containing decimals that shows your reasoning.

37. Critique Reasoning Oscar is 12 years old and his little sister is 6. Oscar uses a to represent his age. He says that he can use the expression $a \div 2$ to always know his sister's age. Do you agree? Explain.

Assessment Practice

38. Which is the solution to the equation below?

$0.26y = 0.676$

Ⓐ $y = 0.17576$

Ⓑ $y = 0.26$

Ⓒ $y = 2.6$

Ⓓ $y = 26$

39. Which is the solution to the equation below?

$0.435 + x = 0.92$

Ⓐ $x = 1.355$

Ⓑ $x = 0.595$

Ⓒ $x = 0.495$

Ⓓ $x = 0.485$

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