

5. Write a single expression (number sentence) for the problem, and solve.

A store was selling movies that originally cost \$19.95 with a \$5 discount.
Mia bought five of them. What was the total cost?

6. Is 991 divisible by 4?

Why or why not?

7. Factor the following numbers to their prime factors.

a. 26
/\

b. 40
/\

c. 59
/\

Large Numbers

8. Write the numbers.

a. 70 million 16 thousand 90

b. 32 billion 232 thousand

9. Estimate the result of $31,933 \times 305$.

10. What is the value of the digit 8 in the number **56,782,010,000**?

11. Round these numbers to the nearest thousand, nearest ten thousand, nearest hundred thousand, and nearest million.

| | | |
|------------------------|---------|------------|
| <i>number</i> | 593,204 | 19,054,947 |
| to the nearest 1,000 | | |
| to the nearest 10,000 | | |
| to the nearest 100,000 | | |
| to the nearest million | | |

Problem Solving

12. Jack has an 8-ft long board. He cuts off $\frac{1}{6}$ of it.
How long is the remaining piece, in feet and inches?

13. A website charges a fixed amount for each song download.
If you can download six songs for \$4.68, then how much would it cost to download ten songs?

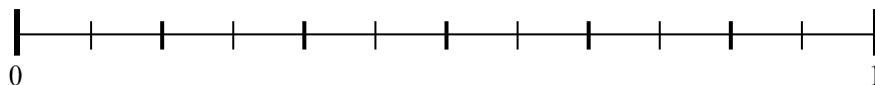
14. A meal in a fancy restaurant costs three times as much as a meal in the cafeteria.
The meal in the fancy restaurant costs \$36. In a 5-day workweek, Mary ate lunch at the fancy restaurant once, and in the cafeteria the rest of the days.
How much did she spend on lunch that week?

Fractions

32. Add and subtract.

| | | |
|--|--|---|
| <p>a.</p> $\begin{array}{r} 3\frac{7}{9} \\ + 2\frac{5}{9} \\ \hline \end{array}$ | <p>b.</p> $\begin{array}{r} 5\frac{1}{6} \\ - 2\frac{5}{6} \\ \hline \end{array}$ | <p>c.</p> $\begin{array}{r} 3\frac{7}{10} \\ 2\frac{8}{10} \\ + 7\frac{3}{10} \\ \hline \end{array}$ |
|--|--|---|

33. Mark the fractions on the number line. $\frac{3}{4}$, $\frac{1}{3}$, $\frac{4}{6}$, $\frac{5}{12}$



34. If you can find an equivalent fraction, write it. If you cannot, cross the whole problem out.

| | | | |
|--|--|--|---|
| a. $\frac{5}{6} = \frac{\quad}{20}$ | b. $\frac{2}{7} = \frac{\quad}{28}$ | c. $\frac{3}{8} = \frac{15}{\quad}$ | d. $\frac{2}{9} = \frac{6}{\quad}$ |
|--|--|--|---|

35. Find the errors in Mia's calculation and correct them.

$$\frac{2}{5} + \frac{2}{3}$$

↓ ↓

$$\frac{2}{15} + \frac{2}{15} = \frac{4}{15}$$

"I need these to have the same denominator."

36. Add and subtract the fractions and mixed numbers.

| | |
|---------------------------------|----------------------------------|
| a. $\frac{1}{3} + \frac{5}{6}$ | b. $\frac{4}{5} - \frac{1}{3}$ |
| c. $6\frac{1}{8} - \frac{1}{2}$ | d. $6\frac{7}{9} + 3\frac{1}{2}$ |

37. You need $2\frac{3}{4}$ cups of flour for one batch of rolls.

Find how much flour you would need for three batches of rolls.

38. Compare the fractions, and write $<$, $>$, or $=$ in the box.

a. $\frac{6}{9} \square \frac{6}{13}$

b. $\frac{6}{13} \square \frac{1}{2}$

c. $\frac{5}{10} \square \frac{48}{100}$

d. $\frac{1}{4} \square \frac{25}{100}$

e. $\frac{5}{7} \square \frac{7}{10}$

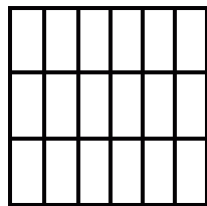
39. Simplify the following fractions if possible. Give your answer as a mixed number when you can.

| | | |
|----------------------|----------------------|----------------------|
| a. $\frac{21}{15} =$ | b. $\frac{29}{36} =$ | c. $\frac{42}{48} =$ |
|----------------------|----------------------|----------------------|

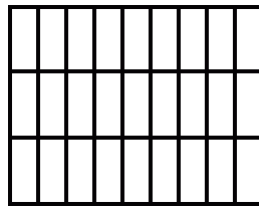
40. Is the following multiplication correct?
If not, correct it.

$$\frac{2}{3} \times \text{circle with 2/3 shaded} = \text{circle with 1/3 shaded}$$

41. Multiply the fractions, and shade a picture to illustrate the multiplication.



a. $\frac{1}{3} \times \frac{5}{6}$



b. $\frac{2}{9} \times \frac{2}{3}$

42. How many $\frac{1}{4}$ ft pieces can you cut from a string that is 15 feet long?

43. Three people share half a pizza evenly. What fractional part of the original pizza does each one get?

44. Solve. Give your answer as a mixed number and simplified to lowest terms.

a. $\frac{7}{6} \times 9$

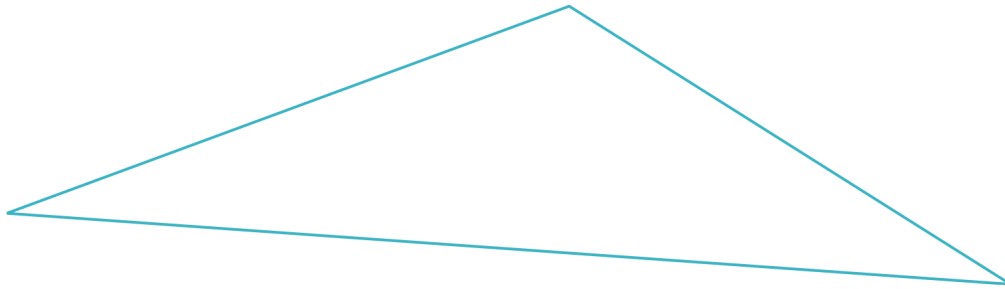
b. $\frac{1}{7} \div 3$

c. $\frac{4}{5} \times 3\frac{2}{3}$

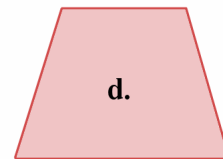
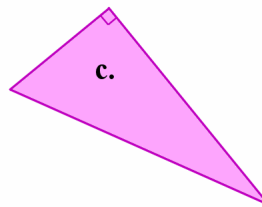
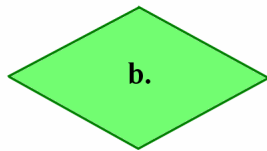
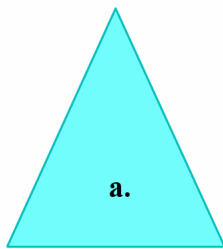
d. $2 \div \frac{1}{9}$

Geometry

45. Measure the sides of the triangle in inches. Find its perimeter.



46. Below you see two triangles and two quadrilaterals. Classify the triangles according to their sides and angles. Name the quadrilaterals.



a. _____

b. _____

c. _____

d. _____

47. a. A square has a perimeter of 12 m. What is its area?

b. A square has an area of 25 ft^2 . What is its perimeter?

48. Is a square a trapezoid? Why or why not?

49. Can an obtuse triangle be isosceles?

If not, explain why not.

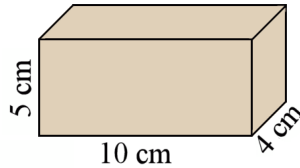
If yes, sketch an example.

50. **a.** Draw a right triangle with 5 cm and 7 cm perpendicular sides.

b. Find its perimeter.

c. Measure its angles. They measure _____ $^{\circ}$, _____ $^{\circ}$, and _____ $^{\circ}$.

51. This is a rectangular prism.
Find its volume.



52. Matthew has a rainwater collection tank in his yard that is rectangular, like a box. It is 1.2 m long, 60 cm wide, and 1 m tall.

a. Find the volume of the tank in cubic meters.

b. After a rainy night, the tank was about $\frac{1}{3}$ full.

About how many liters of water were in the tank?

1 cubic meter equals 1,000 liters.