
# Grade 6 FAST Mathematics

## Spring 2024 Released Test Items

# Introduction

Section 1008.22(8), Florida Statutes (F.S.), requires the Department to publish each statewide, standardized assessment administered, excluding retakes, at least once on a triennial basis, with the initial publication occurring after the Spring 2024 test administration. The initial publication of assessments must include, at a minimum, the grade 3 Mathematics and English Language Arts (ELA) Reading assessments, the grade 10 ELA Reading assessment and the Algebra 1 End-of-Course (EOC) Assessment. Per statute, released content must have appeared on tests in the administration year immediately preceding release. Based on those requirements, below is a proposed timeline for the release of operational tests beginning with the 2023–24 school year.

| June 2024 | June 2025 | June 2026 |
|---|---|---|
| Grade 3 Mathematics & ELA Reading | Grade 5 Mathematics & ELA Reading | Grade 4 Mathematics & ELA Reading |
| Grade 6 Mathematics & ELA Reading | Grade 8 Mathematics & ELA Reading | Grade 7 Mathematics & ELA Reading |
| Grade 8 Science | Grade 5 Science | Biology 1 EOC |
| Grade 10 ELA Reading | Grade 9 ELA Reading | |
| Algebra 1 EOC | Geometry EOC | |
| Civics EOC | U.S. History EOC | |
| Annually: Grades 4–10 Writing prompts and individual student responses | | |

The purpose of the released tests is to promote transparency in the statewide, standardized assessment program and to increase the comfort level of students and parents with the state assessments. Students, parents, and teachers should use the released tests to better understand the types of items on Florida's K–12 statewide assessments.

This released test includes the content that represents its operational test blueprint. The items are presented as they appeared on the computer-based test platform.

Students, parents/guardians, and educators should review the 2024 Test Release Support Document located on the Florida Statewide Assessments Portal. The Test Release Support Document includes an answer key, the percentage of students who answered that item correctly, the reporting category that the item fits in, and the item benchmark information.

For more information about K–12 assessments, please visit https://www.fldoe.org/accountability/assessments/k-12-student-assessment/.

For questions related to this document or released tests in general, please contact Assessment@fldoe.org.

# Grade 6 FAST Mathematics Reference Sheet

## Customary Conversions

1 foot = 12 inches
1 yard = 3 feet
1 mile = 5,280 feet
1 mile = 1,760 yards

1 cup = 8 fluid ounces
1 pint = 2 cups
1 quart = 2 pints
1 gallon = 4 quarts

1 pound = 16 ounces
1 ton = 2,000 pounds

## Metric Conversions

1 meter = 100 centimeters
1 meter = 1000 millimeters
1 kilometer = 1000 meters

1 liter = 1000 milliliters

1 gram = 1000 milligrams
1 kilogram = 1000 grams

## Time Conversions

1 minute = 60 seconds
1 hour = 60 minutes
1 day = 24 hours
1 week = 7 days
1 year = 365 days
1 year = 52 weeks

## Formulas

Rectangular Prism

$V = lwh$

or

$V = Bh$

| Key | |
|---|---|
| $l$ = length | $B$ = area of base |
| $w$ = width | $V$ = volume |
| $h$ = height | |

**1.** Jackson has a weekly reading goal. He needs to read for at least 2 hours to meet his goal this week.

Which inequality models $r$, the number of hours Jackson needs to spend reading this week?

Ⓐ $r < 2$

Ⓑ $r > 2$

Ⓒ $r \leq 2$

Ⓓ $r \geq 2$

**2.** The number 84 is 35% of what number?

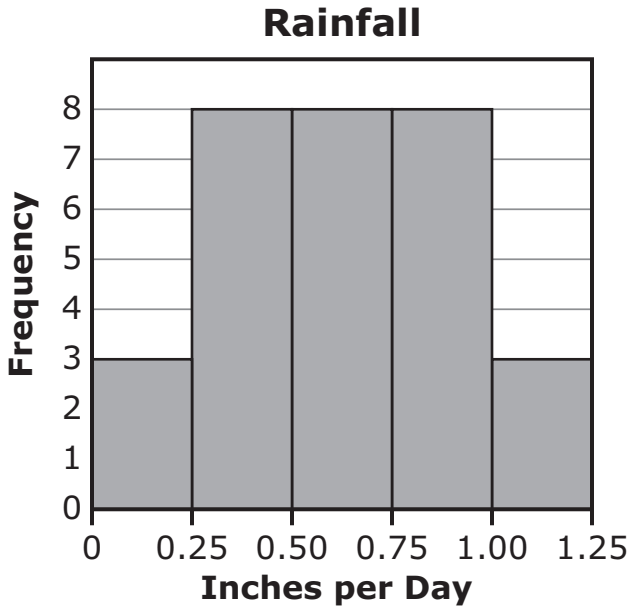
Ⓐ 2.4

Ⓑ 29.4

Ⓒ 240

Ⓓ 2940

**3.** The histogram shows the inches of rainfall per day in a town for one month.




Which sentence describes the distribution?

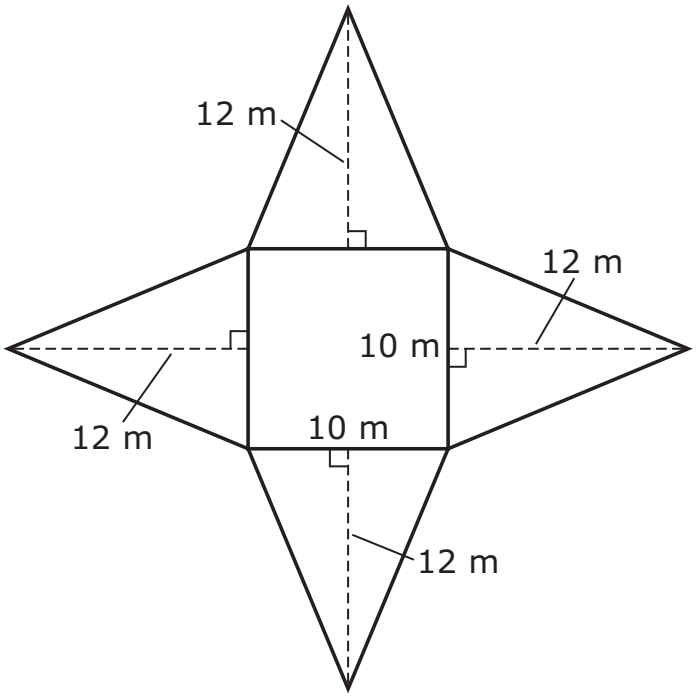
Ⓐ The distribution has a gap.

Ⓑ The distribution is skewed.

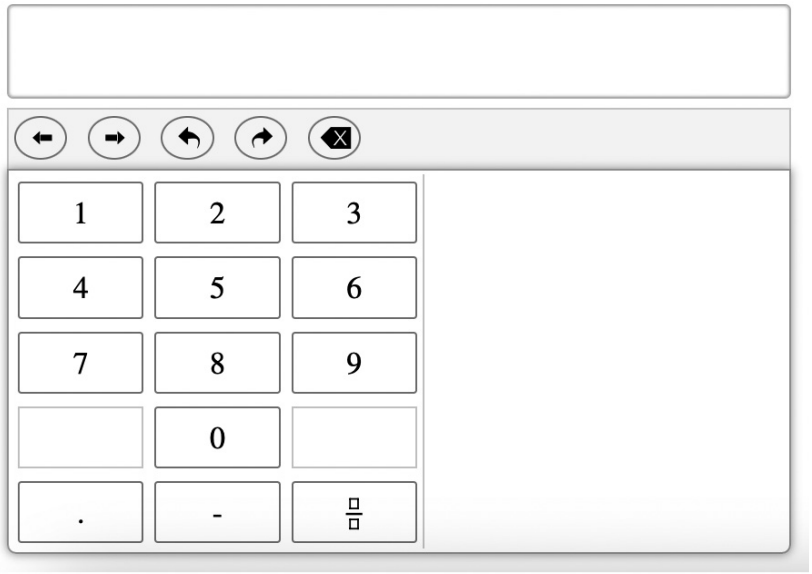
Ⓒ The distribution is symmetric.

Ⓓ The distribution contains an outlier.

**4.** The net of a square pyramid is shown, with dimensions in meters (m).




What is the surface area, in square meters, of the pyramid?



**5.** Select all the expressions that have a value of 18.

Ⓐ $14 - |4|$

Ⓑ $|16| + |-2|$

Ⓒ $|6| + |-24|$

Ⓓ $|20| - |-2|$

Ⓔ $|-27| + |9|$

**6.** On a baseball team, 7 players are in sixth grade and 10 players are in seventh grade.

What is the ratio of the number of players in sixth grade to the total number of players?

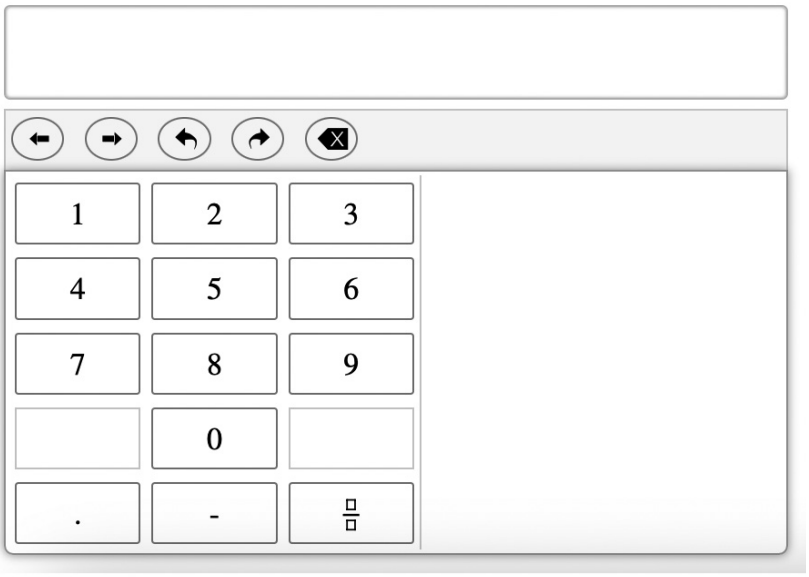
Ⓐ 7:3

Ⓑ 7:10

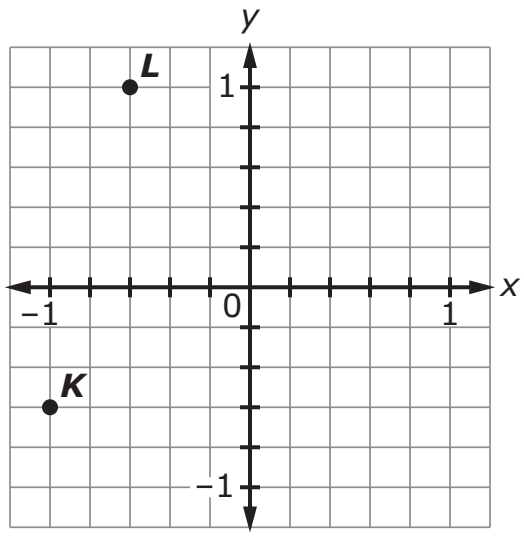
Ⓒ 7:17

Ⓓ 10:17

**7.** What is the value of –133 – 42?



**8.** Points *L* and *K* are shown on the coordinate plane.




Match each point with its coordinates.

| | **(1, −0.6)** | **(−0.6, 1)** | **(−0.6, −1)** | **(−1, −0.6)** |
|---|---|---|---|---|
| **Point *K*** | Ⓐ | Ⓑ | Ⓒ | Ⓓ |
| **Point *L*** | Ⓔ | Ⓕ | Ⓖ | Ⓗ |

**9.** Richard uploads $\frac{1}{6}$ of his photo library to a file sharing site in $\frac{1}{2}$ minute.

If the upload continues at the same constant rate, what fraction of Richard's photo library can he upload per minute to the file sharing site?

Ⓐ $\frac{1}{180}$

Ⓑ $\frac{1}{12}$

Ⓒ $\frac{1}{3}$

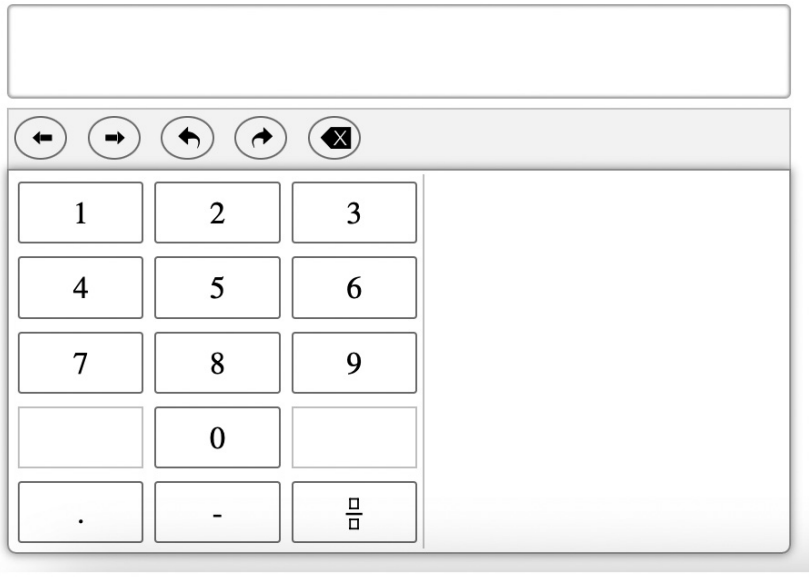
Ⓓ 3

**10.** Aisha records the outdoor temperature, in degrees Fahrenheit (°F), each day for 5 days in the table shown.

**Outdoor Temperature**

| Day | Temperature (°F) |
|---|---|
| Monday | 76.5 |
| Tuesday | 70.2 |
| Wednesday | 63.0 |
| Thursday | 71.9 |
| Friday | 73.4 |

What is the mean temperature of Aisha's data?



**11.** What is the value of $1^3$?

Ⓐ 1

Ⓑ 3

Ⓒ 111

Ⓓ 1000

**12.** What is the value of the product of 3.42 and 0.11?

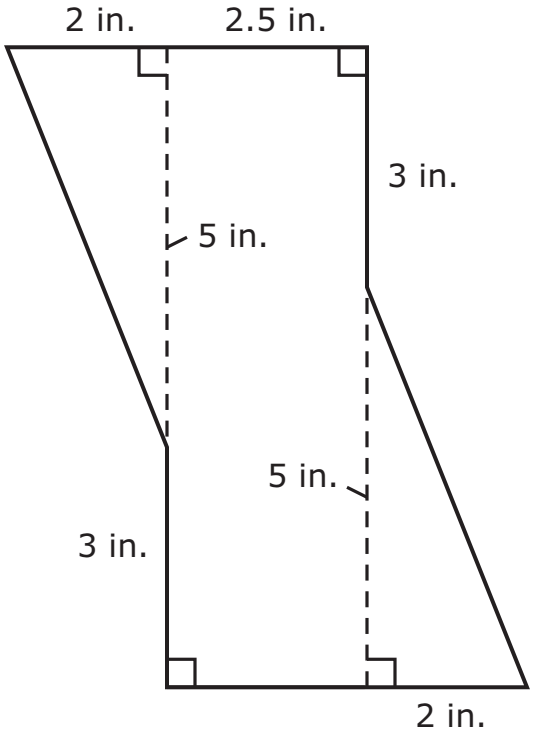
Ⓐ 0.0342

Ⓑ 0.03762

Ⓒ 0.342

Ⓓ 0.3762

**13.** A figure is shown, with dimensions in inches (in.).




What is the area of the figure?

Ⓐ 25 square inches

Ⓑ 30 square inches

Ⓒ 36 square inches

Ⓓ 40 square inches

**14.** Select all the values for $j$ that make $j + 2 < 17$ true.

Ⓐ −15

Ⓑ −10

Ⓒ 0

Ⓓ 15

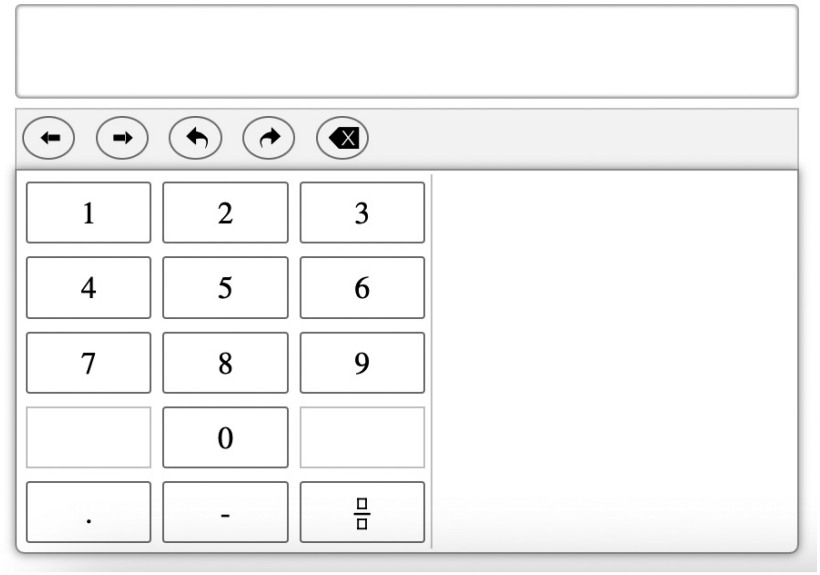
Ⓔ 17

Ⓕ 20

**15.** Malia has 2 bags of oranges and 1 bag of grapefruit.

- The first bag of oranges weighs 1.4 pounds, and the second bag weighs 2.8 pounds.
- The bag of grapefruit weighs 2.25 times as much as the two bags of oranges combined.

What is the weight, in pounds, of the bag of grapefruit?



**16.** Claudia buys a 240-page book. She will read 20 pages of the book every week.

Which expression represents how many pages Claudia has left to read after $w$ weeks?

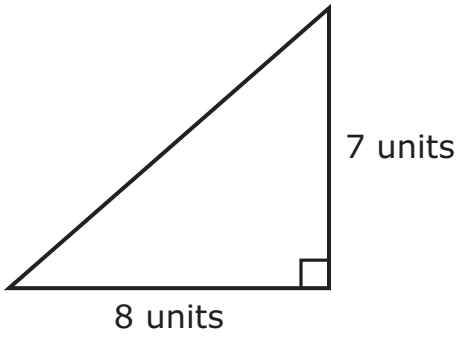
Ⓐ $240 - 20w$

Ⓑ $240w - 20$

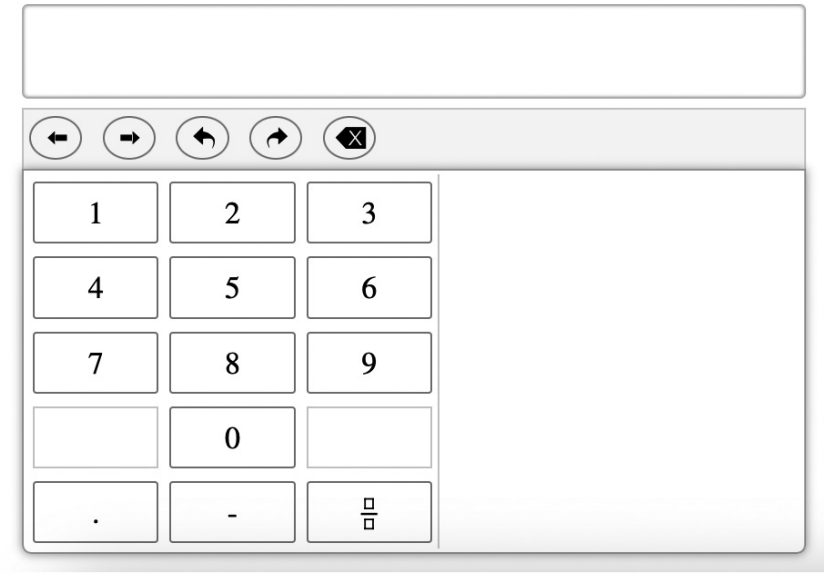
Ⓒ $240 + 20w$

Ⓓ $240w + 20$

**17.** A right triangle is shown.




What is the area, in square units, of the triangle?



**18.** Which decimal is equivalent to $3\frac{4}{5}$

Ⓐ 0.345

Ⓑ 0.38

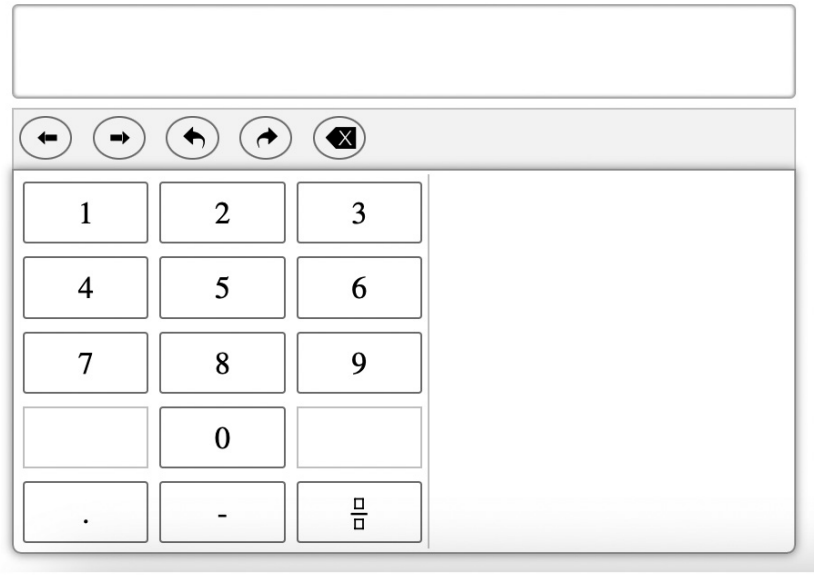
Ⓒ 3.45

Ⓓ 3.8

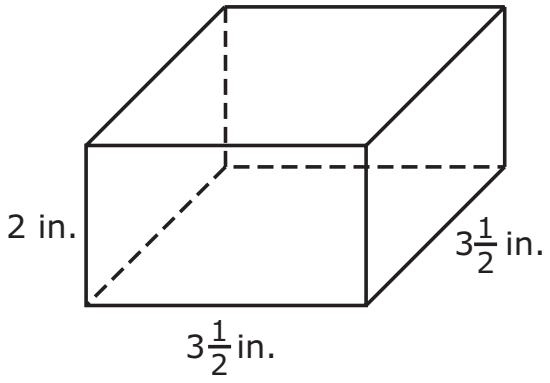
**19.** An equation is shown.

$$2.75 = m - 0.5$$

What is the value of $m$ in the equation?



**20.** A package in the shape of a right rectangular prism is shown, with units in inches (in.).




What is the volume, in cubic inches, of the package?

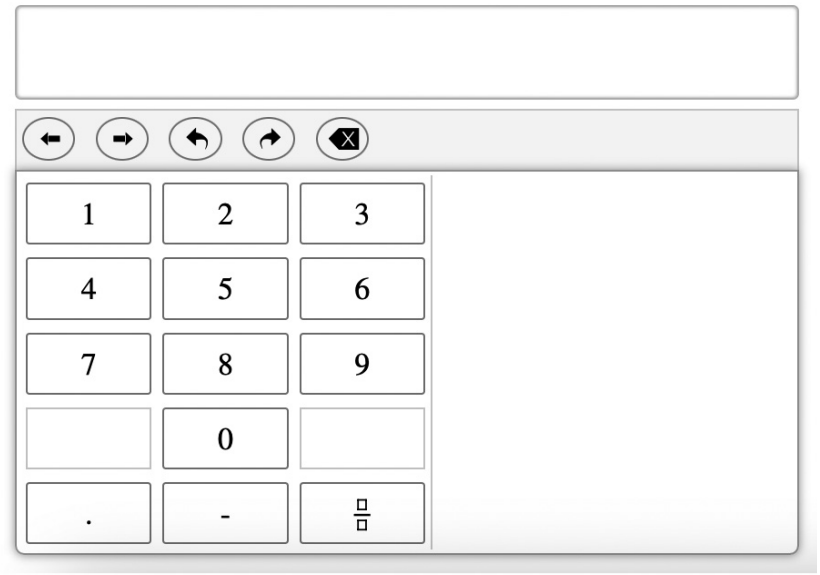
Ⓐ 9

Ⓑ $12\frac{1}{4}$

Ⓒ $18\frac{1}{4}$

Ⓓ $24\frac{1}{2}$

**21.** What is $\frac{41}{20}$ written as a decimal?



**22.** Marquis can plant 25 flowers in 10 minutes.

Which ratio can be used to evaluate the unit rate, in flowers per minute?

Ⓐ $\frac{25}{10}$

Ⓑ $\frac{10}{25}$

Ⓒ $\frac{10}{35}$

Ⓓ $\frac{25}{35}$

**23.** An equation is shown.

$$\frac{5}{12} + x = \frac{11}{12}$$

What is the value of $x$?

Ⓐ $\frac{6}{12}$

Ⓑ $\frac{7}{12}$

Ⓒ $\frac{16}{24}$

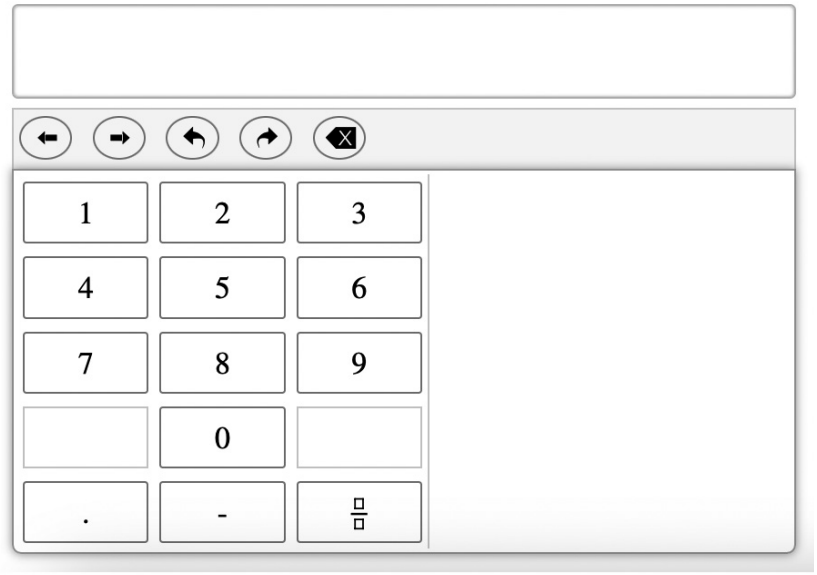
Ⓓ $1\frac{4}{12}$

**24.** A farmer measures the heights, in inches, of randomly selected corn stalks. His data are shown.

{38, 44, 35, 38, 41, 33}

He measures another corn stalk that increases the range of his data set by exactly 8 inches.

What is a possible height for the corn stalk, in inches, that increases the range by 8 inches?



**25.** Which set of values is in order from least to greatest?

Ⓐ –13.4, –17.2, 11.03, 11.7

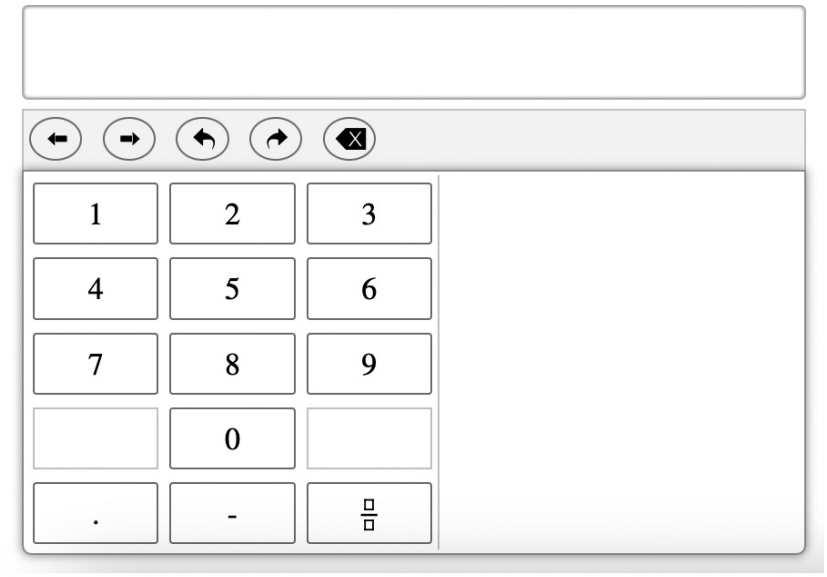
Ⓑ –17.2, –13.4, 11.03, 11.7

Ⓒ –13.4, –17.2, 11.7, 11.03

Ⓓ –17.2, –13.4, 11.7, 11.03

**26.** At a factory, 2 cars are assembled every 36 hours of run time.

How many cars are assembled at the factory every 126 hours of run time?



**27.** Which value for $x$ makes the inequality $-3x > 18$ true?

Ⓐ –8

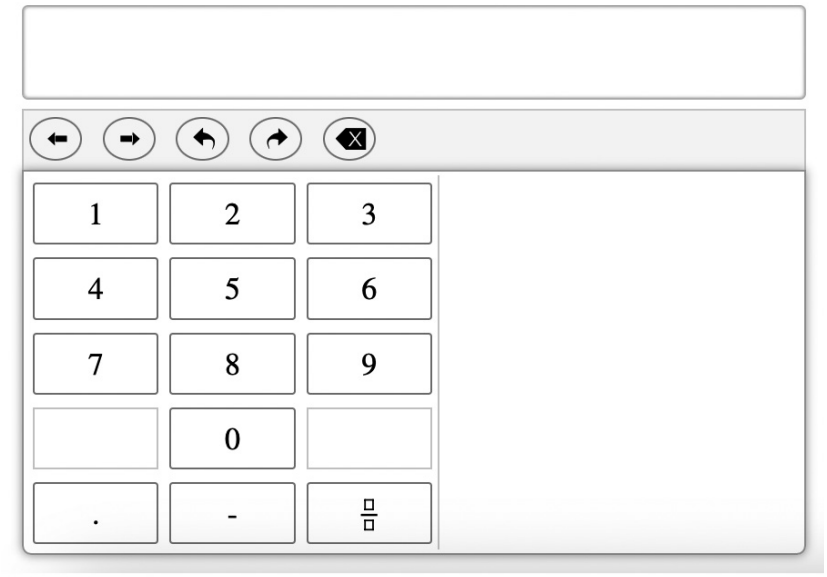
Ⓑ –6

Ⓒ 6

Ⓓ 8

**28.** On a coordinate plane, point *J* is located at (–6, 3) and point *K* is located at (7, 3).

What is the distance, in units, between points *J* and *K*?



**29.** The average temperatures, in degrees Celsius, in a city on 10 consecutive days are shown.

{7.1, 6.6, 10.1, 5.9, 7.9, 10.1, 9.2, 7.9, 7.1, 7.1}

Select a number and phrase to describe the range of the data.

The range of the data is

| |
|---|
| Ⓐ 10.1 |
| Ⓑ 7.9 |
| Ⓒ 7.5 |
| Ⓓ 7.1 |
| Ⓔ 5.8 |
| Ⓕ 4.2 |

and it describes

| |
|---|
| Ⓐ the spread of |
| Ⓑ the middle value of |
| Ⓒ the maximum value of |
| Ⓓ the value most often found in |

the data.

**30.** What is the value of |−12| − |5|?

Ⓐ −17

Ⓑ −7

Ⓒ 7

Ⓓ 17

**31.** What is the product of 3.74 and 0.8?

Ⓐ 2.982

Ⓑ 2.992

Ⓒ 29.82

Ⓓ 29.92

**32.** Ana and Brett evaluate the expression $\frac{4}{5} \div 2\frac{5}{11}$.

- Ana's answer is $\frac{135}{44}$.
- Brett's answer is $3\frac{3}{44}$.

Who evaluated the expression correctly?

Ⓐ Ana

Ⓑ Brett

Ⓒ both Ana and Brett

Ⓓ neither Ana nor Brett

**33.** An expression is shown.

$$435 + 105$$

Which is an equivalent expression?

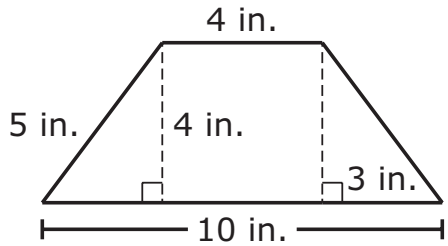
Ⓐ 15 (29 + 7)

Ⓑ 5 (87 + 20)

Ⓒ 3 (135 + 35)

Ⓓ 29 (15 + 105)

**34.** Vanessa makes a shelf in the shape of an isosceles trapezoid for a corner bookcase. The shelf, with dimensions in inches (in.), is shown.




What is the area, in square inches, of the shelf?

Ⓐ 28

Ⓑ 40

Ⓒ 43

Ⓓ 46

**35.** An equation is shown.

$$-6x = -72$$

What is the value of $x$?

Ⓐ –432

Ⓑ –12

Ⓒ 12

Ⓓ 432

**36.** Select all the values that are located 3 units to the right of 0 on a number line.

Ⓐ 3

Ⓑ –3

Ⓒ |3|

Ⓓ |–3|

Ⓔ –|3|

Ⓕ –|–3|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