
Tennessee Comprehensive Assessment Program
TCAP

TNReady — Grade 7 Math Part II

PRACTICE TEST

Student Name

Teacher Name



Tennessee Department of Education



Directions

Subtest 1 of this Practice Test booklet contains sample items for Grade 7 Math. Write your answers in this Practice Test booklet.

You MAY NOT use a calculator in Subtest 1 of this test booklet.

Sample A: Selected-Response

Circle **all** expressions equivalent to $4(9 + 3)$.

- A. $4(12)$
- B. $36 + 3$
- C. $36 + 12$
- D. $4 + (9 + 3)$
- E. $(9 + 3) + (9 + 3) + (9 + 3) + (9 + 3)$

Sample B: Table

Select **True** or **False** to indicate whether each comparison is true.

	True	False
$3^2 < \frac{4}{9} + \frac{2}{3}$		
$2(2^3 + 14 \cdot 2) \geq 9 \cdot 8$		
$16.2 \cdot 3 - 24.6 < 72 \div 3 + 2.78$		

Sample Answers

- A. A, C, E
- B. False, True, True



1. Evaluate:

$$4\frac{2}{3} - \left(-1\frac{4}{5}\right)$$

A. $-7\frac{2}{15}$

B. $2\frac{13}{15}$

C. $6\frac{7}{15}$

D. $7\frac{2}{15}$

2. Solve for m :

$$-\frac{2}{9}m + 12 = -8$$

Write your answer in the space provided.

3. While on a camping trip, Calvin was monitoring the temperature.

- In the afternoon, the temperature was -4°C .
- As the evening progressed, the temperature dropped 7°C .
- By mid-morning the next day, the temperature had risen 3°C .

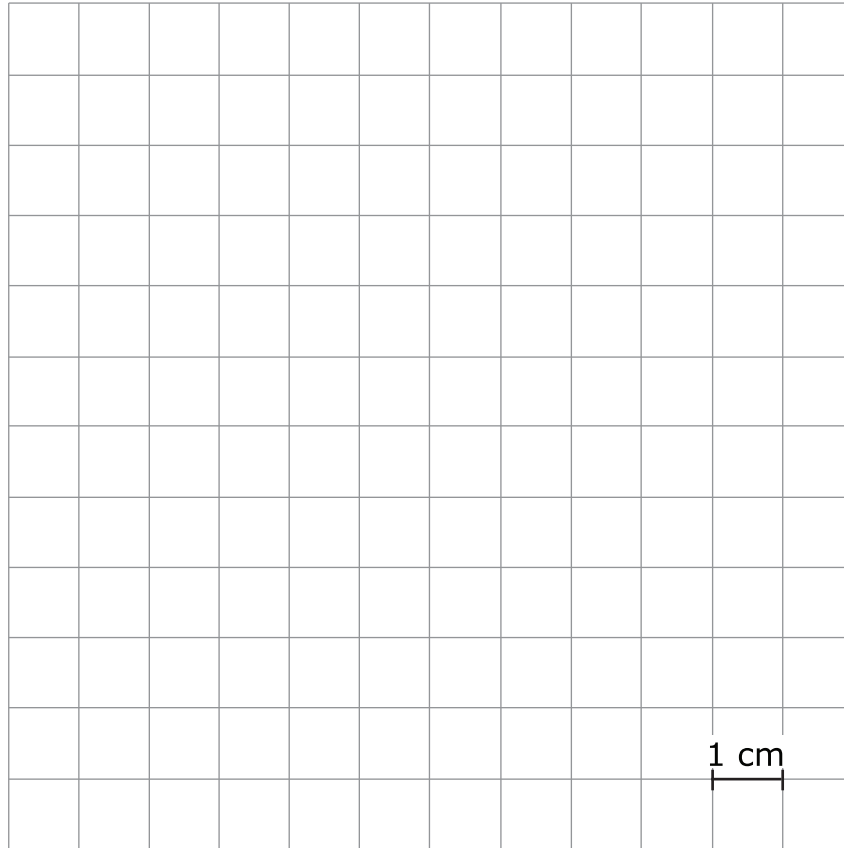
What was the temperature, in degrees Celsius, after these changes?

Write your answer in the space provided.



4. A square garden has sides that are 10 feet in length.

Draw a scale drawing of the garden using a scale of 3 centimeters = 5 feet.





5. At a local gym, a random sample of 75 members took a survey about their favorite type of exercise.

Gym Survey Results

Type	Number of Members
Bicycling	18
Exercise Classes	22
Running on Treadmill	15
Weight Lifting	20

There are 350 total gym members. Based on the results of the survey, what is the **most** reasonable estimate for the number of gym members who prefer running on the treadmill?

- A. 23
- B. 70
- C. 85
- D. 93
6. Look at the rational numbers in both lists.
Match the fraction in the first column with the equivalent decimal in the second column.

Fractions

Decimals

$$\frac{5}{11}$$

$$0.375$$

$$0.37\bar{5}$$

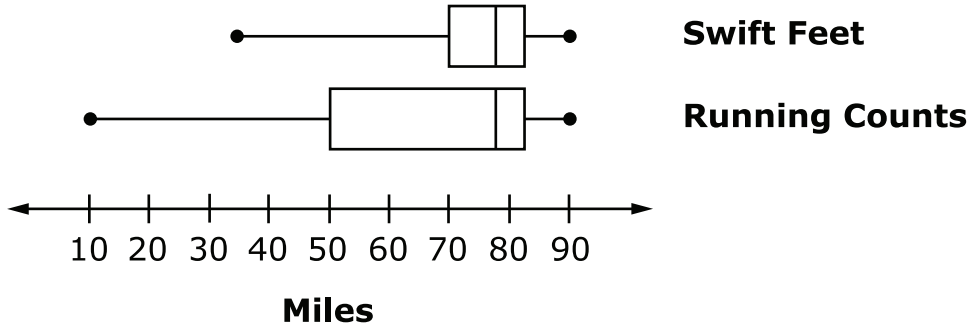
$$\frac{3}{8}$$

$$0.4\bar{5}$$

$$0.45$$

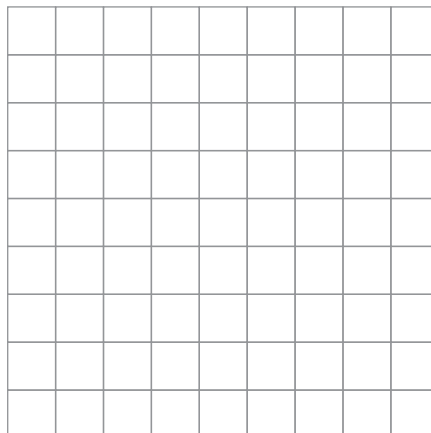


7. The members of two running clubs entered their daily running totals into a computer program. The leaders of the two clubs randomly selected 25 days of the year and created box-and-whisker plots showing the total number of miles run by club members on the 25 selected days.



Which inference about the running groups is valid based on the samples given?

- A. The Swift Feet club has fewer members than the Running Counts club.
 - B. The members of the Running Counts club run more slowly than the members of the Swift Feet club.
 - C. The median number of miles run by members of both clubs was close to 80 miles.
 - D. The total miles run by members of both clubs vary by about the same amount.
8. A right square pyramid is sliced by a horizontal plane parallel to the base. Draw a possible plane section of the right square pyramid as described.





9. Nancy is buying a new pair of boots. The store is having a sale and all boots are 20% off.

Circle **one** value from the box below each sentence to correctly complete the sentence.

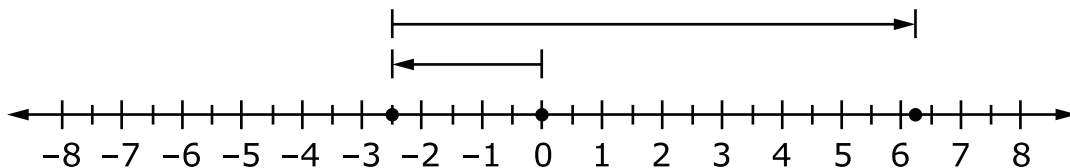
An expression that can represent the sale price of the boots is A, where x is the original price of the boots.

Box A
$0.2x$
$0.8x$
$1.2x$

This means the sale price of the boots is B of the original cost.

Box B
20%
80%
120%

10. Which situation is **best** described by this number line?



- A. Ryder owed his mom \$2.50. He does some chores and makes \$6.25.
- B. Ryder had \$6.25. He needs to buy school supplies and ends up owing his mother \$2.50.
- C. Ryder owed his mom \$2.50. He babysits his sister and makes \$8.75.
- D. Ryder owed his mom \$2.50. He also owes his father \$8.75.



11. Select **all** expressions shown that are equivalent to $\frac{3}{5}a + 10$.

A. $\frac{1}{5}a + 10 + \frac{2}{5}a$

B. $a\left(\frac{3}{5} + 10\right)$

C. $14 + \frac{3}{5}a - 4$

D. $\frac{1}{5}(3a + 50)$

E. $10 + \frac{2}{5}a - a + \frac{1}{5}a$



- 12.** Karen gets 3 books from her book club for \$12. She creates a graph to show the relationship between the number of books and the total cost of the books. Points on the graph include $(0,0)$, $(1, 4)$, $(2, 8)$, and $(3, 12)$.

Circle **one** coordinate or phrase from the box below each sentence to correctly complete the sentence.

The ordered pair **A** represents unit rate.

Box A
$(0, 0)$
$(1, 4)$
$(2, 8)$
$(3, 12)$

The x-value of the ordered pair represents the **B**.

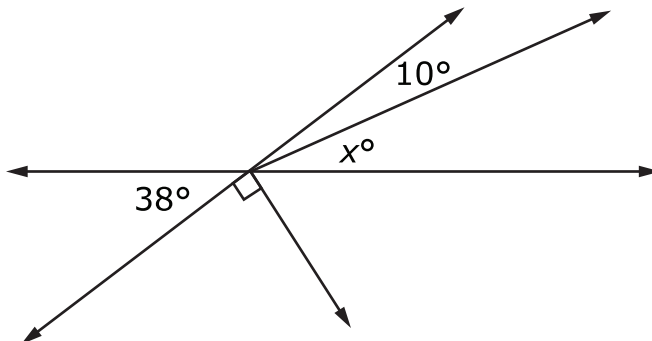
Box B
number of books
cost of the books

The y-value of the ordered pair represents the **C**.

Box C
number of books
cost of the books



13. What is the value of x ?



Write your answer in the space provided.

**Directions**

Subtest 2 of this Practice Test booklet contains sample items for Grade 7 Math. Write your answers in this Practice Test booklet.

You MAY use a calculator in Subtest 2 of this test booklet.

14. Select **all** of the expressions that are equivalent to $\frac{2}{3}(9x + 6) - \frac{1}{2}(8x - 4)$.

A. $2(x + 1)$

B. $2x + 6$

C. $2x + 2$

D. $2(x + 3)$

E. $8x$

15. A random sample of 40 blocks was removed from a container. The blocks removed included 9 black, 15 red, 11 yellow, and 5 orange blocks.

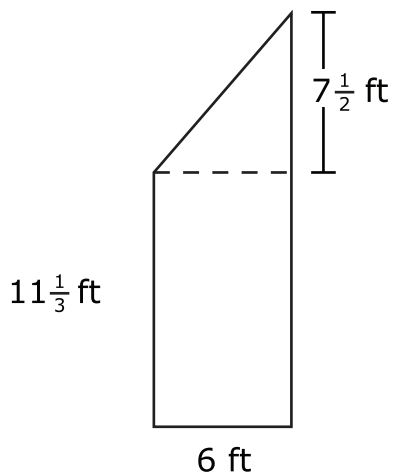
Based on the experimental results, determine the probability of removing each color of block from the container.

Draw an **X** in the table to match each color with the probability for that color.

	$\frac{1}{8}$	$\frac{3}{8}$	0.225	0.275
Black				
Red				
Yellow				
Orange				



16. The measurements of a figure are shown.



What is the area, in square feet, of the figure?

Write your answer in the space provided.

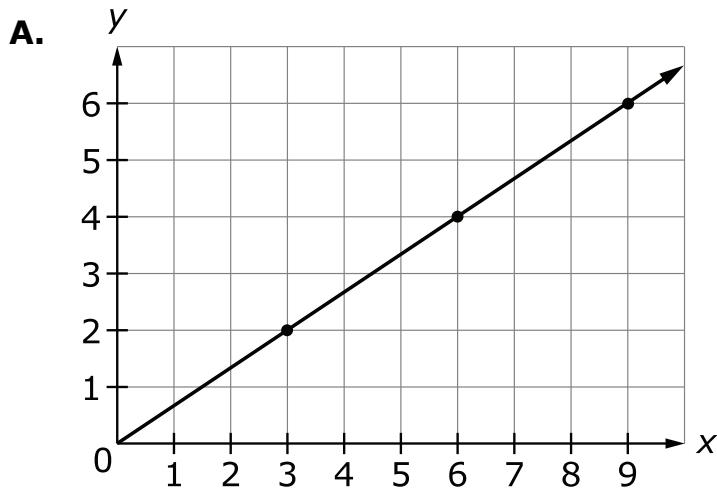
17. Sandals are on sale for 30% off. The original price of one pair of sandals is \$15.

What is the total cost, in dollars, of **two** pairs of sandals at the sale price and including 7% sales tax?

Write your answer in the space provided.

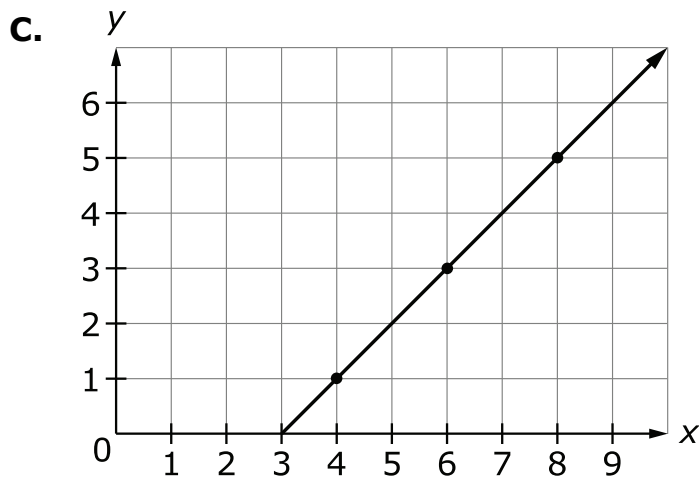


18. Select **all** that represent a proportional relationship.



B.

x	y
2	3
4	4
6	5
8	6



D.

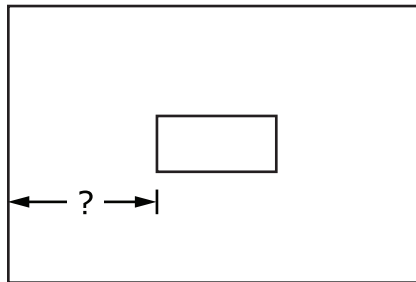
x	y
3	1
6	2
9	3
12	4



- 19.** In the year 2010, the population of Kingsford was 8000. By 2014 the population had increased by 15% and $\frac{2}{5}$ of the population was age 12 or under.

How many people in Kingsford were age 12 or under in the year 2014?

- A.** 1200
B. 3200
C. 3680
D. 5520
- 20.** Margaret is placing a picture on a wall that is $7\frac{1}{2}$ feet long. The picture is 27 inches across and will be hung in the center of the wall, as shown in the drawing.



$7\frac{1}{2}$ ft

What is the distance, in inches, from one edge of the wall to the picture?

Write your answer in the space provided.



- 21.** Nathan conducted a probability experiment in which he dropped 5 toothpicks at the same time. He recorded the number of toothpicks that were touching when they landed. He then picked up the toothpicks and repeated the experiment. After dropping the toothpicks and recording the results 50 times, Nathan concluded that it was more likely than not that at least 2 toothpicks would be touching when they landed. He also observed that sometimes no toothpicks were touching. Which **best** represents the probability that at least 2 toothpicks will be touching when they land?

- A. $\frac{1}{4}$
- B. $\frac{1}{2}$
- C. $\frac{3}{4}$
- D. 1

- 22.** The lengths or angles given represent the sides or angles of a triangle.

For each set of angles or sides, draw an **X** in the appropriate box:
 Unique Triangle, More Than One Triangle, or No Triangle.

	Unique Triangle	More Than One Triangle	No Triangle
5 cm, 10 cm, 12 cm			
40°, 50°, 80°			
8 ft, 12 ft, 20 ft			
28°, 51°, 101°			



- 23.** Ms. Allen filled a glass jar with marbles. Students guessed the number of marbles in the jar.

Jen guessed there were 127 marbles in the jar. The jar contained 132 marbles.

To the nearest tenth of a percent, what is the percentage of error for Jen's guess?

Write your answer in the space provided.



24. Margo records the relationship between the amounts of raisins and peanuts she mixes to create different batches of her trail mix.

Batch	A	B	C	D	E
Ounces of raisins	1	2	3	4	5
Cups of peanuts	1.25	2.5	3.75	5	6.25

Using the information provided in the table, circle **one** choice from the box below each sentence to correctly complete the sentence.

The ordered pair has a y -coordinate that is the constant of proportionality for the relationship.

Box A
(1, 1.25)
(2, 2.5)
(4, 5)

Based on the proportional relationship, 8 ounces of raisins require cups of peanuts.

Box B
6.5
7.75
10
11.25



- 25.** The music preferences of a random sample of 75 middle-school students are recorded in the table. There are 1257 students in the middle school.

Music Preference Sample	
Music Type	Number of Students
Rock	19
Pop	27
Country	29

Select **two** statements that are valid for the entire middle school based on the information from the random sample.

- A.** Approximately 452 of the students prefer pop music.
- B.** Approximately 19 of the students prefer rock music.
- C.** Approximately 39% of the students prefer country music.
- D.** Approximately $\frac{1}{3}$ of the students prefer rock music.