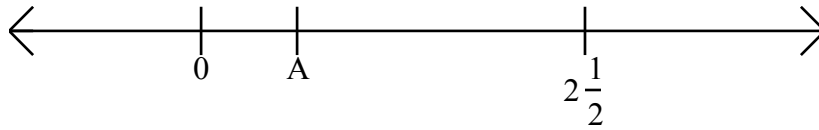


1. $2 \times 10^0 + 3 \times 10^1 + 4 \times 10^3$ is equal to which of the following?
- 234
 - 432
 - 4032
 - 4030
 - 4320
2. Which one of these numbers is not equal to the others? 2.125 212.5% $2\frac{1}{8}$ $\frac{21250}{1000}$ $\frac{34}{16}$
- 2.125
 - 212.5%
 - $2\frac{1}{8}$
 - $\frac{21250}{1000}$
 - $\frac{34}{16}$
3. What is the sum of the greatest number and the least number in this list?
- $$\frac{8}{5} \quad -\frac{11}{20} \quad \frac{9}{4} \quad -\frac{1}{2} \quad \frac{3}{10}$$
- $\frac{34}{20}$
 - $-\frac{34}{20}$
 - $\frac{7}{4}$
 - $-\frac{7}{4}$
 - $\frac{21}{20}$
4. Charlie has scores of 88, 95, and 89 on the first three tests. What score must he make on the fourth test so that the average of all four tests is exactly 93?
- 91.25
 - 93
 - $95\frac{1}{3}$
 - 97
 - 100

5. Which is the best approximation for the coordinate of point A?



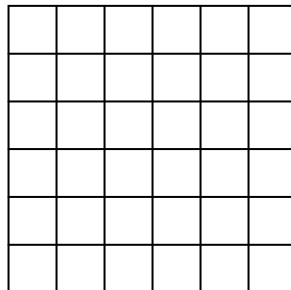
- a. $\frac{1}{4}$
 b. $\frac{5}{8}$
 c. 1
 d. $1\frac{1}{2}$
 e. 2
6. A machine has two slots for input. After you put some chips in slot 1 and some chips in slot 2, the machine gives you some chips as output. Here is a sample.

Slot 1 Input	Slot 2 Input	Output
4 red chips	1 red chip	3 red chips
4 red chips	1 blue chip	5 red chips
4 blue chips	1 blue chip	3 blue chips
1 blue chip	4 blue chips	3 red chips
1 blue chip	4 red chips	5 blue chips

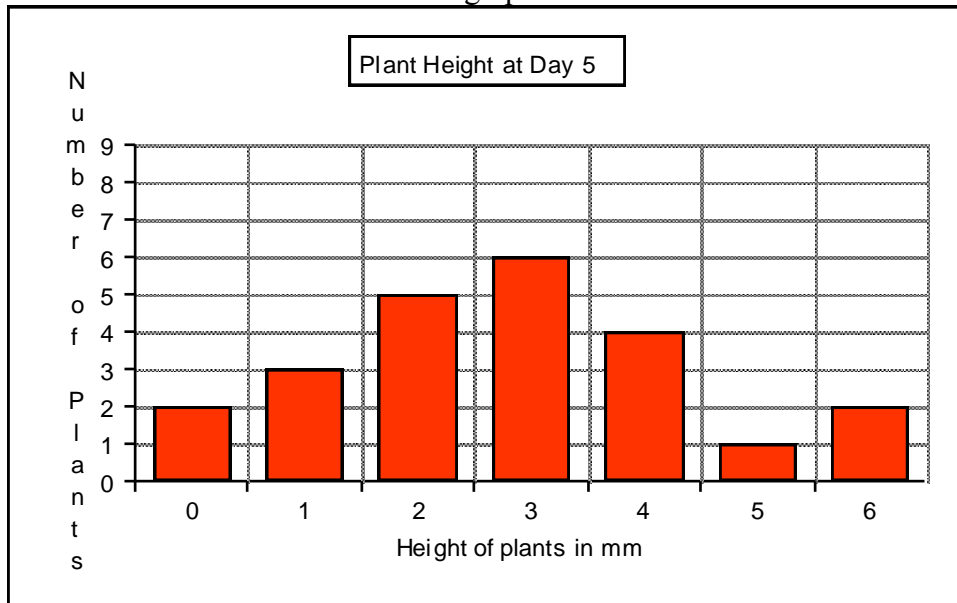
Based upon the given information, what should be the output if 3 red chips are put in slot 1 and 5 blue chips are put into slot 2?

- a. 8 red chips
 b. 2 red chips
 c. 8 blue chips
 d. 2 blue chips
 e. 4 blue chips
7. A parallelogram is drawn on a coordinate plane. Three of its vertices are at (0, 1), (1, 0), and (2, 2). What are the two possible locations for the fourth vertex?

- a. (1, 3) and (3, 1)
 b. (2, 3) and (3, 2)
 c. (0, 3) and (3, 0)
 d. (4, 2) and (2, 4)
 e. (5, 1) and (1, 5)



8. Consider the information in the graph shown here.



According to the graph above, which statement is true?

- There are 3 plants 6 millimeters tall.
 - There are 5 plants that are more than 4 millimeters tall.
 - There are no plants that are 2 millimeters tall.
 - There are twenty five plants being measured for this experiment.
 - There are 6 plants that are 3 millimeters tall.
9. A taxi cab driver charges his passengers \$2.00 for a trip that is one mile or less. For trips over 1 mile, she adds a charge of 15¢ for every tenth of a mile past the first mile. One passenger was charged \$3.95. How far did that passenger travel?
- 14 miles
 - 13 miles
 - 2.6 miles
 - 2.3 miles
 - 1.3 miles
10. Jack was to be paid \$24 for raking the leaves in his yard. Jack raked the leaves in three fourths of the yard. Then Jill came over. Jill agreed to help Jack rake the rest of the yard. Jack and Jill each did the same amount of work on that part of the yard. For Jack and Jill to receive the same rate of pay, how much of the \$24 should Jill be paid?
- \$1
 - \$2
 - \$3
 - \$4
 - \$6

11. In the year 2000, Happy Kennel sold 48 puppies. In the year 2001, they sold 125% more puppies than they did the year before. How many puppies did they sell in 2001?

- a. 60 puppies
- b. 96 puppies
- c. 108 puppies
- d. 125 puppies
- e. 173 puppies

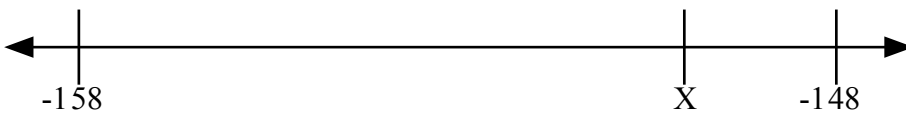
12. This page is 279 millimeters long from top to bottom. Which of the following line segments is 15 centimeters long?

- a. _____
- b. _____
- c. _____
- d. _____
- e. _____

13. Which of the following is the prime factorization of 120?

- a. $2 \cdot 2 \cdot 3 \cdot 10$
- b. $2 \cdot 2 \cdot 2 \cdot 15$
- c. $2 \cdot 2 \cdot 2 \cdot 3 \cdot 5$
- d. $2 \cdot 2 \cdot 2 \cdot 2 \cdot 3 \cdot 5$
- e. $2 \cdot 3 \cdot 4 \cdot 5$

14. A section of a number line is shown below. What integer corresponds to X (assuming the integers are evenly spaced along the number line)?



- a. -146
- b. -150
- c. -153
- d. -149
- e. -156

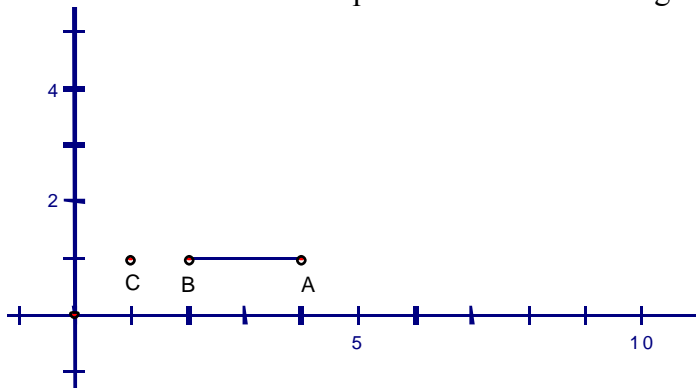
15. There are 52 children on the playground. Thirteen of the children are girls. Which of the following is the ratio of girls to boys on the playground?

- a. 1:3
- b. 3:1
- c. 1:4
- d. 4:1
- e. 13:52

16. A machine weaves $2\frac{2}{3}$ meters of fabric in the first hour of operation. All the rest of the time the machine runs, it weaves $3\frac{2}{3}$ meters per hour. If the machine is turned on and allowed to run for 25 hours, how many meters of fabric will it weave?

- a. $158\frac{1}{3}$ meters
- b. $94\frac{1}{3}$ meters
- c. $90\frac{2}{3}$ meters
- d. $70\frac{1}{3}$ meters
- e. $67\frac{2}{3}$ meters

17. In the grid shown below, segment BA is rotated 90° counterclockwise about point C. What will be the new coordinates of point A after the line segment is rotated?

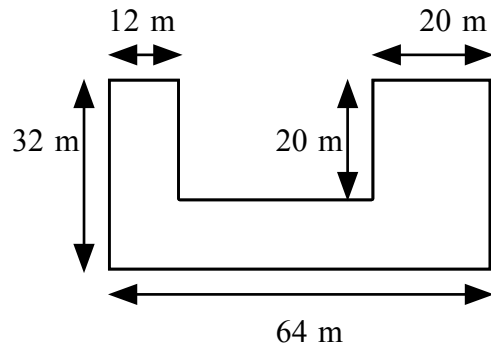


- a. (2, 4)
- b. (2, 3)
- c. (1, 4)
- d. (1, 3)
- e. (1, 2)

18. If $x + y = 8$ and $x + z = 12$, which statement must be true?

- a. $12 - z = 8 - y$
- b. $y > z$
- c. $y < x < z$
- d. $x + y + z = 20$
- e. $x + y = x + z + 4$

19. In the figure shown below, all angles are right angles. What is the area of the figure shown?



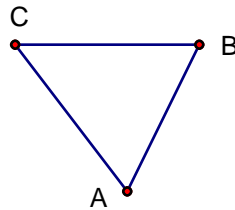
- 232 meters
- 1408 square meters
- 1648 square meters
- 2048 square meters
- 2688 square meters

20. Given the information about the triangle shown below, which statement must be true?

$$m\angle CAB = 64^\circ$$

$$m\overline{CA} = 2 \text{ cm}$$

$$m\overline{CB} = 2 \text{ cm}$$

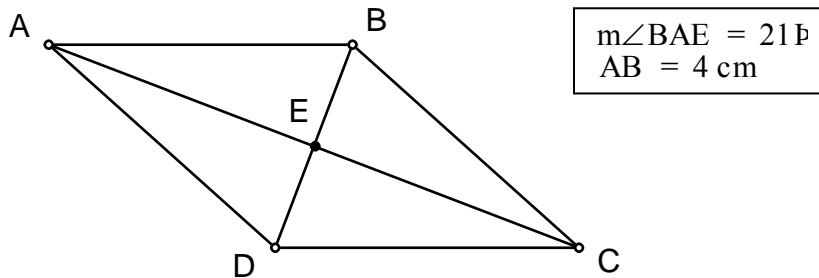


- The length of segment AB is 2 cm.
- The measure of angle B is 52° .
- The measure of angle C is 64° .
- The measure of angle A is 52° .
- The measure of angle B is 64° .

21. Minnie is holding a yardstick perpendicular to the ground. The shadow of the yardstick is 27 inches long. Minnie's shadow is 4 feet 6 inches long. How tall is Minnie?

- 5 feet tall
- 5 feet 6 inches tall
- 40.5 inches tall
- 60 inches tall
- 6 feet tall

22. The quadrilateral shown below is a rhombus with the given angle measure. In every rhombus the diagonals are perpendicular bisectors of each other. What is the measure of angle ADC?



- a. 159°
 b. 138°
 c. 117°
 d. 111°
 e. 90°
23. Bill has a bag of apples. He gives $\frac{3}{4}$ of the apples in the bag to Joe. Joe gives $\frac{1}{3}$ of the apples he got to Millie. Millie gives half the apples she got to Kim. What fraction of the original bag did Kim get?

- a. $\frac{1}{4}$
 b. $\frac{1}{12}$
 c. $-\frac{1}{12}$
 d. $\frac{1}{8}$
 e. $\frac{1}{6}$

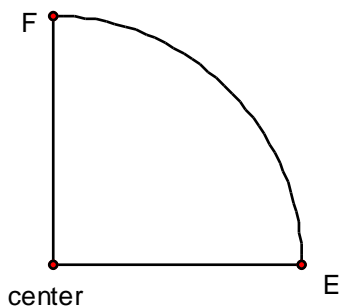
24. A 2-foot by 2-foot square that is 10 inches deep contains about 1,000,000 snowflakes. Overnight 7 inches of snow fell on a football field that is 360 feet by 160 feet. How many snowflakes were on the field?

- a. 14,400,000,000 snowflakes
 b. 10,080,000,000 snowflakes
 c. 28,800,000,000 snowflakes
 d. 20,160,000,000 snowflakes
 e. 40,320,000,000 snowflakes


25. Alex has won a radio contest that allows him to draw three bills that he can keep from a bag that contains 50 five-dollar bills, 20 ten-dollar bills, 15 twenty-dollar bills, 10 fifty-dollar bills, and 5 hundred-dollar bills. What is the probability that Alex will get \$300?

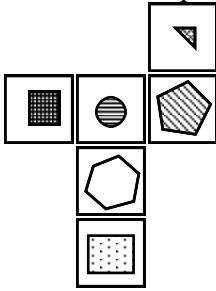
- a. $\frac{1}{8000}$
- b. $\frac{5}{100}$
- c. $\frac{1}{16170}$
- d. $\frac{3}{50000}$
- e. $\frac{3}{40000}$






26. Mark is going to put a brick border all the way around a flower garden that is shaped like one-fourth of a circle as shown in the figure below. The distance from the center to point E is 18 feet. The bricks are 4 inches long and cost 10¢ each. How much will he have to pay for the bricks?



- a. \$5.20
 - b. \$6.50
 - c. \$7.20
 - d. \$19.30
 - e. \$25.50
27. A square is folded in half to form 2 congruent rectangles. If the perimeter of one of the rectangles is 18 centimeters, what is the perimeter of the original square?
- a. 72 centimeters
 - b. 48 centimeters
 - c. 36 centimeters
 - d. 30 centimeters
 - e. 24 centimeters

28. The figure shown below is cut out and folded to form a cube. The cube is turned so that the  is on the top face. What design is on the bottom face?



- a. 
 b. 
 c. 
 d. 
 e. 

29. On a number line, B is 2 units to the left of A. D is 5 units to the right of B. E is 2 units to the right of D. It is one unit farther from C to E than it is from C to B. What is the distance from A to C?

- a. 0 units
 b. 1 units
 c. 2 units
 d. 3 units
 e. 4 units

30. A local warehouse-type store advertises that all its everyday prices are 60% off retail. During a sale, they advertise that sale prices will be 70% off retail. What percent discount is the store offering off its everyday price?

- a. 40%
 b. 35%
 c. 30%
 d. 25%
 e. 10%