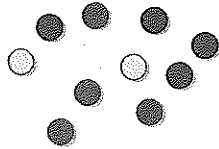




# Florida Benchmark Pre-Test

1. Look at the counters shown below. How many blue counters must be added so that the ratio of yellow counters to total counters is 1:6?



- (A) 2                      (C) 12  
(B) 4                      (D) 14

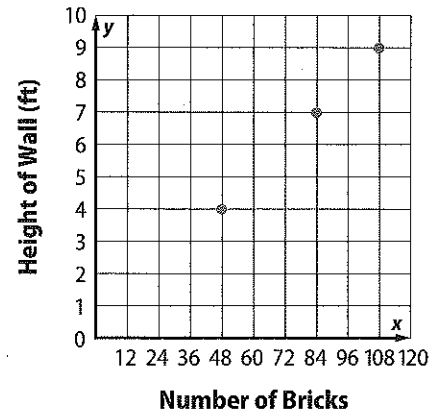
2. Zariah is training for a 5-kilometer run, which is about 3 miles. She begins her training by running 1 mile each day for 5 days. She records the number of minutes it takes her to run a mile, as seen in the table. What is her average time in feet per second?

| Day        | 1  | 2  | 3  | 4  | 5  |
|------------|----|----|----|----|----|
| Time (min) | 15 | 13 | 16 | 14 | 12 |

- (A) 0.16 feet per second  
(B) 5.87 feet per second  
(C) 6.29 feet per second  
(D) 18.86 feet per second
3. Lee spent 10 hours at the pool last week. She practiced the butterfly for 2 hours, the breaststroke for 5 hours, and the backstroke for 3 hours. This week she only has 5 hours to spend at the pool. She wants to keep the same percentage of time spent on each stroke. How many hours will she practice the breaststroke?

- (A) 0.5 hour              (C) 1.5 hours  
(B) 1 hour                (D) 2.5 hours

4. The number of bricks used in a wall is proportional to the height of the wall.



Which statement describes the relationship expressed by the graph?

- (A) As the height of the wall increases by 1 foot, there are 12 more bricks in the wall.  
(B) For every 48 bricks, the wall increases by 3 feet.  
(C) For every 36 bricks, the wall increases by 4 feet.  
(D) As the height of the wall increases by 2 feet, there are 48 more bricks in the wall.
5. Students were surveyed about any special trips they took during summer vacation. Thirty percent of the people who stated they traveled to another state, did not travel by car. How many people did travel by car to another state?

| Summer Trips            | Number of People |
|-------------------------|------------------|
| Summer camp             | 253              |
| Travel to another state | 180              |
| Visiting grandparents   | 327              |

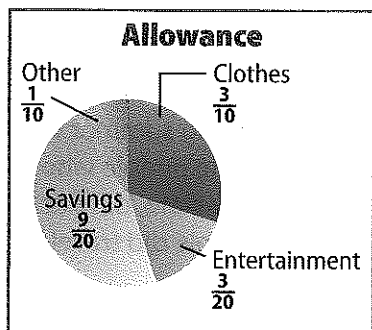
- (A) 24                      (C) 54  
(B) 76                      (D) 126



6. The table shows the percent of each type of car rented last month at Frank's Rentals. What fraction represents rentals for a minivan or convertible?

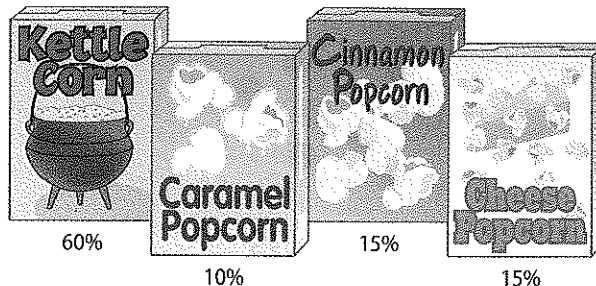
| Frank's Rentals |                |
|-----------------|----------------|
| Type of Car     | Percent Rented |
| Minivan         | 15             |
| Sport Utility   | 40             |
| Sedan           | 10             |
| Convertible     | 5              |
| Sports Car      | 5              |
| Truck           | 25             |

- (A)  $\frac{1}{5}$   
 (B)  $\frac{3}{20}$   
 (C)  $\frac{1}{10}$   
 (D)  $\frac{1}{20}$
7. Bianca receives \$20 a week for her allowance. The graph shows how Bianca spends her weekly allowance. What decimal represents the part she spends on entertainment and clothes?



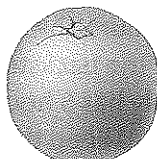
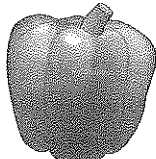
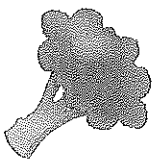
- (A) 0.15  
 (B) 0.3  
 (C) 0.45  
 (D) 0.9

8. A specialty food store carries four popcorn flavors. The percentage of each type of flavor carried by the store is shown below.



All the boxes of cinnamon and cheese popcorn are displayed at the front entrance. If the display has 60 boxes, how many boxes of popcorn does the store have in all?

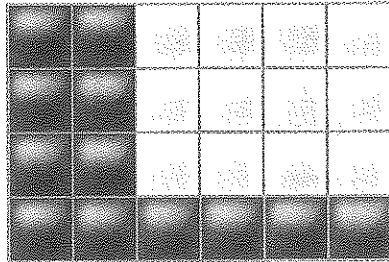
- (A) 400  
 (B) 200  
 (C) 100  
 (D) 30
9. It is recommended that 13-year old girls get 45 milligrams of vitamin C each day. The table shows the vitamin C content of three foods. What percentage of the recommended amount will Ardis receive if she eats all of these foods in one day?

| Approximate Vitamin C Content  |   |   |
|--|---|---|
|  |  |  |
| 1 orange   | 1 green pepper  | 1 cup cooked broccoli   |
| 70 mg  | 100 mg  | 100 mg  |

- (A) 2.22  
 (B) 6.00  
 (C) 270  
 (D) 600



10. A tile wall is shown below. Each tile measures 4 inches by 4 inches. Which of the following statements is true?



- (A) The red tiles occupy 120% of the wall surface.
  - (B) The red tiles occupy the same percentage of the wall surface as the white tiles.
  - (C) The red tiles occupy a greater percentage of the wall surface than the white tiles.
  - (D) The red tiles occupy a lesser percentage of the wall surface than the white tiles.
11. Keera is buying items for her kitchen. She buys a mixing bowl, a spatula, and measuring cups. If tax on her purchases will be \$2.20, how much change will she receive from a \$50 bill?

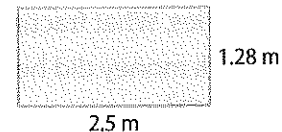
| Item           | Cost (\$) |
|----------------|-----------|
| Bread Pan      | 14.95     |
| Measuring Cups | 10.89     |
| Mixing Bowl    | 12.05     |
| Spatula        | 8.37      |

- (A) \$16.49
- (B) \$18.69
- (C) \$31.31
- (D) \$33.51

12. Mrs. Moseley is buying peanuts to make brittle. The 5 scoops of peanuts she purchases weigh  $1\frac{3}{4}$  pounds and the price of peanuts is \$2.89 per pound. About how much did she pay for the peanuts?

- (A) less than \$4
- (B) between \$5 and \$6
- (C) between \$6 and \$7
- (D) more than \$7

13. The rectangle represents Mr. Demarco's garden. For each square meter, he needs to use 2.5 scoops of fertilizer. How many scoops of fertilizer does he need for the entire garden?



- (A) 20
- (B) 18.9
- (C) 8
- (D) 3.2

14. On Monday, Mika checked her purse and found she had \$9.50. On Tuesday, she buys as many bumper stickers as she can from the school store. On Saturday, she gets \$12.50 for her allowance. How much money does she have after receiving her allowance on Saturday?

| School Store   |           |
|----------------|-----------|
| Item           | Cost (\$) |
| Hat            | \$6.00    |
| Mug            | \$5.50    |
| Bumper Sticker | \$1.25    |

- (A) \$22.00
- (B) \$20.75
- (C) \$20.10
- (D) \$13.25



15. Sophia, Mandy, and Alexis are cousins. Sophia is  $\frac{3}{4}$  as tall as Mandy. Alexis is  $\frac{5}{6}$  as tall as Mandy. What is the difference in height between Sophia and Alexis if Mandy is 5 feet tall?

- (A)  $\frac{1}{12}$  foot
- (B)  $\frac{5}{12}$  foot
- (C)  $4\frac{1}{6}$  feet
- (D)  $3\frac{3}{4}$  feet

16. Denzel earned money after school delivering newspapers and doing yardwork. He put  $\frac{1}{2}$  of this month's earnings into his savings. He took the rest to spend at the amusement park. He spent  $\frac{1}{5}$  of this amount on popcorn and  $\frac{3}{4}$  of it on rides. What fraction of his amusement park money did he spend on rides and popcorn?

- (A)  $\frac{19}{40}$
- (B)  $\frac{11}{20}$
- (C)  $\frac{1}{10}$
- (D)  $\frac{3}{8}$

17. The Daniels family made fudge and brownies for a school fundraiser. They made 9 pounds of fudge. The fudge was separated into  $\frac{3}{4}$ -pound blocks. They sell each block for \$6.50. If they sell all the fudge, how much money will they make?

- (A) \$6.75
- (B) \$12.00
- (C) \$43.88
- (D) \$78.00

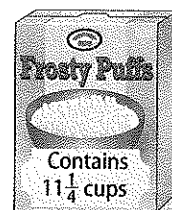
18. The Culinary Club received a gift box of nuts. The contents of the box are shown in the table below.

| Type of Nut | Weight (lb)   |
|-------------|---------------|
| Almonds     | $\frac{1}{2}$ |
| Cashews     | $\frac{1}{4}$ |
| Peanuts     | $\frac{3}{8}$ |
| Pinenuts    | $\frac{3}{8}$ |
| Walnuts     | $\frac{3}{4}$ |

The students decide to make snack bags that contain  $\frac{1}{8}$  pound of one type of nut. How many more bags of walnuts will they have than bags of peanuts?

- (A) 1
- (B) 2
- (C) 3
- (D) 6

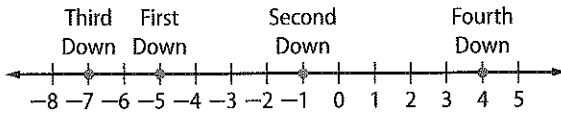
19. The Martinez family purchased a box of Frosty Puffs cereal as shown below. How many  $\frac{3}{4}$ -cup servings of cereal can be made from the box of cereal?



- (A)  $8\frac{7}{16}$
- (B)  $10\frac{1}{2}$
- (C) 12
- (D) 15



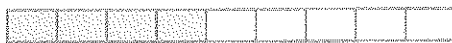
20. A football team has four chances called downs to gain at least 10 yards. Zero on the number line represents the starting point before the first down. During which down did the team gain 4 yards from the previous down?



- (A) First Down (C) Third Down  
 (B) Second Down (D) Fourth Down
21. Which set displays numbers ordered from greatest value to least value?

- (A)  $\{-|-3|, |-2|, -1, \frac{1}{2}, -0.5\}$   
 (B)  $\{\frac{1}{2}, -0.5, -1, |-2|, -|-3|\}$   
 (C)  $\{|-2|, \frac{1}{2}, -0.5, -1, -|-3|\}$   
 (D)  $\{\frac{1}{2}, -|-3|, |-2|, -1, -0.5\}$

22. Which decimal represents the shaded portion of the figure?



- (A) 0.4 (C) 0.5  
 (B)  $0.\bar{4}$  (D)  $0.\bar{5}$
23. What are the coordinates of  $Y'$  after  $Y(-3.5, 5)$  is reflected across the  $x$ -axis?

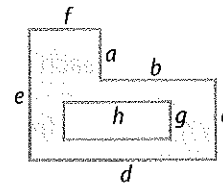
- (A)  $(3.5, -5)$   
 (B)  $(-3.5, -5)$   
 (C)  $(5, -3.5)$   
 (D)  $(3.5, 5)$

24. What is the value of the expression below in simplest terms?

$$\frac{142 - (3^3 - 36 + 2)^2}{10 + 3(10 - 6) + 27 \div 3}$$

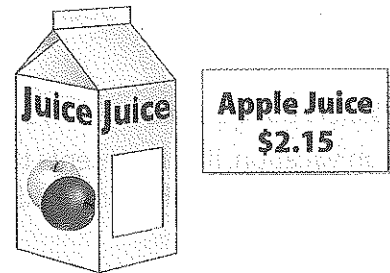
- (A) 3 (C) 5  
 (B) 4 (D) 6

25. Which expression represents the area of the shaded region in the figure?



- (A)  $gh + ab$   
 (B)  $ed - gh$   
 (C)  $fa + cd - gh$   
 (D)  $(a + b + c + d + e + f) - (g + h)$

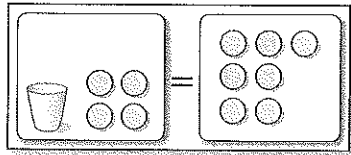
26. Wen buys 5 cartons of apple juice. Choose the equation that shows equivalent expressions that model the total cost.



- (A)  $5(2.15) = 5(2) + 0.15$   
 (B)  $5(2.15) = 5(2) - 0.15$   
 (C)  $5(2.15) = 5(2) + 5(0.15)$   
 (D)  $5(2.15) = 5(2) - 5(0.15)$



27. The model represents the equation  $x + 4 = 7$ .



What of the following is the first step in finding the value of  $x$ ?

- (A) Add 4 counters to each side.
  - (B) Take away 7 counters from each side.
  - (C) Add 7 counters to each side.
  - (D) Take away 4 counters from each side.
28. Josie took \$5 out of her purse to pay for lunch. She had \$13 left in her purse after doing that. The equation  $x - 5 = 13$  models this situation, where  $x$  represents the amount she originally had in her purse. Which of the following is true to find the value of  $x$ ?
- (A) Add 5 to each side.
  - (B) Subtract 5 from each side.
  - (C) Add 13 to each side.
  - (D) Subtract 13 from each side.
29. The Walkers traveled 182 miles in  $3\frac{1}{2}$  hours while on vacation. If  $m$  represents the average rate at which they traveled, what is the value of  $m$ ?
- (A) 60
  - (B) 52
  - (C) 50
  - (D) 48

30. The sixth grade at Jordan Middle School was divided into 7 teams for a fundraising event. Each team had 14 students. How many students are in the sixth grade at Jordan Middle School?

- (A) 98
- (B) 21
- (C) 2
- (D) 0.5

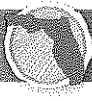
31. The table shows the number of boxes Sandra and Charles can fill with canned food during a food drive, based on the number of hours they worked. How many more boxes can Charles fill than Sandra after 7 hours?

| Hours | Sandra | Charles |
|-------|--------|---------|
| 1     | 4      | 8       |
| 2     | 7      | 16      |
| 3     | 10     | 24      |
| 4     | 13     | 32      |

- (A) 22
- (B) 33
- (C) 34
- (D) 56

32. A movie rental club charges a one time fee of \$25 to join and \$2 for every movie rented. Which equation could represent how much you would spend to join the club and rent movies for a year?

- (A)  $c = 12 + 25m$
- (B)  $c = 25 + 2m$
- (C)  $c = 12m + 2$
- (D)  $c = 25m + 24$



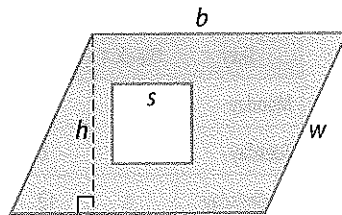
33. If  $x < 11$  and  $x > 4$ , which whole numbers are solutions for  $x$ ?

- (A) {4, 5, 6, 7, 8, 9, 10}
- (B) {5, 6, 7, 8, 9, 10, 11}
- (C) {5, 6, 7, 8, 9, 10}
- (D) {4, 5, 6, 7, 8, 9, 10, 11}

34. Which number line shows the solution to  $7x > 28$ ?

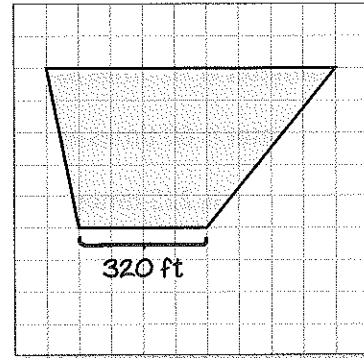
- (A)
- (B)
- (C)
- (D)

35. Li is designing a patch to be added to the basketball uniforms to commemorate the school's 50th anniversary. The patch is a parallelogram with a square. The square will be white. The rest of the parallelogram will be green. To calculate the price of the patch, the supplier needs to know the area of the green section. Which equation can be used to find the green area?



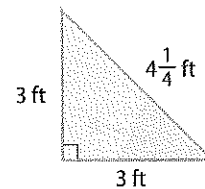
- (A)  $A = bh - s^2$
- (B)  $A = bw - s^2$
- (C)  $A = bw + s^2$
- (D)  $A = bh + s^2$

36. Madeline is researching the new park being built in her state. She drew the figure below on grid paper, which represents the outline of the plot of land being used for the new park. What is the area of this plot of land?



- (A)  $3,200 \text{ ft}^2$
- (B)  $9,000 \text{ ft}^2$
- (C)  $208,000 \text{ ft}^2$
- (D)  $416,000 \text{ ft}^2$

37. Margaret is creating a large piece of metal wall art. She cuts a piece of metal in the shape of a right triangle with the dimensions shown below. What is the area of the metal triangle?



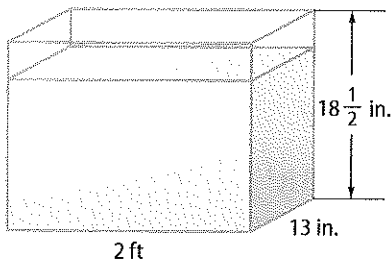
- (A)  $3\frac{1}{4} \text{ ft}^2$
- (B)  $4\frac{1}{2} \text{ ft}^2$
- (C)  $6\frac{3}{8} \text{ ft}^2$
- (D)  $9 \text{ ft}^2$



38. The perimeter of a regular pentagon is 15 centimeters. The pentagon is enlarged so that each side is four times as large as the original. What effect does this enlargement have on the perimeter?

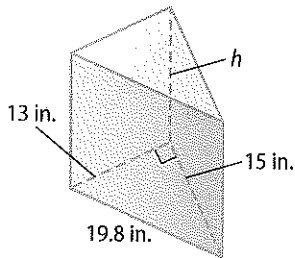
- (A) The perimeter is 4 times as great.
- (B) The perimeter is 16 times as great.
- (C) The perimeter is 60 times as great.
- (D) The perimeter is 225 times as great.

39. If the fish tank is 80% filled with water, what is the volume of the water in the tank?



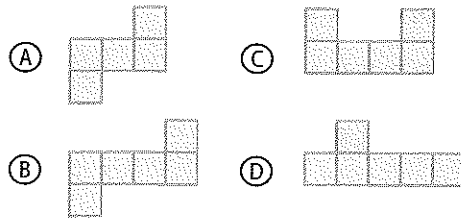
- (A)  $5,772 \text{ in}^3$
- (B)  $4,617.6 \text{ in}^3$
- (C)  $1,154.4 \text{ in}^3$
- (D)  $384.8 \text{ in}^3$

40. The triangular prism shown below has a volume of 1,560 cubic inches. What is the height of the prism?

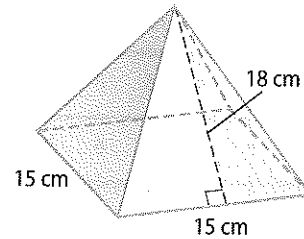


- (A) 8 in.
- (B) 12 in.
- (C) 16 in.
- (D) 24 in.

41. Which net can be used to make and find the surface area of a cube?



42. What is the surface area if the length of the edges of the pyramid are doubled?



- (A)  $765 \text{ cm}^2$
- (B)  $1,530 \text{ cm}^2$
- (C)  $3,060 \text{ cm}^2$
- (D)  $5,220 \text{ cm}^2$

43. The table shows how many trees were sold at a tree farm during a two week period. How much greater was the mean number of trees sold for Week 2 than for Week 1?

| Trees Sold |        |        |
|------------|--------|--------|
| Day        | Week 1 | Week 2 |
| Monday     | 7      | 10     |
| Tuesday    | 12     | 8      |
| Wednesday  | 6      | 12     |
| Thursday   | 14     | 17     |
| Friday     | 22     | 31     |
| Saturday   | 17     | 18     |

- (A) 3
- (B) 13
- (C) 16
- (D) 18





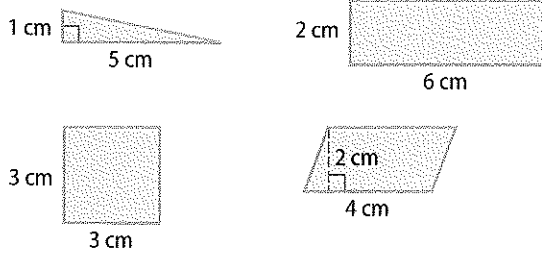
# Florida Benchmark Pre-Test (continued)

44. Four drivers recorded the distance they drove each day for a week as shown in the table below.

| Miles Driven Daily |    |    |    |    |    |    |     |
|--------------------|----|----|----|----|----|----|-----|
|                    | S  | M  | T  | W  | Th | F  | S   |
| Kea                | 8  | 17 | 23 | 16 | 17 | 18 | 125 |
| Cole               | 14 | 26 | 34 | 22 | 47 | 22 | 45  |
| Justin             | 7  | 12 | 11 | 23 | 13 | 23 | 30  |
| Ling               | 52 | 36 | 41 | 31 | 31 | 37 | 59  |

Which driver's data set has a mode that is greater than the mean or median AND a median with the lowest value of the three measures?

- (A) Kea
  - (B) Cole
  - (C) Justin
  - (D) Ling
45. Jamal cut out the polygons shown below from construction paper. What is the interquartile range for the areas of these polygons?



- (A) 5.25
- (B) 6.75
- (C) 8.5
- (D) 9.5

46. What is the mean absolute deviation for the set of high temperatures for the 6 days shown in the table?

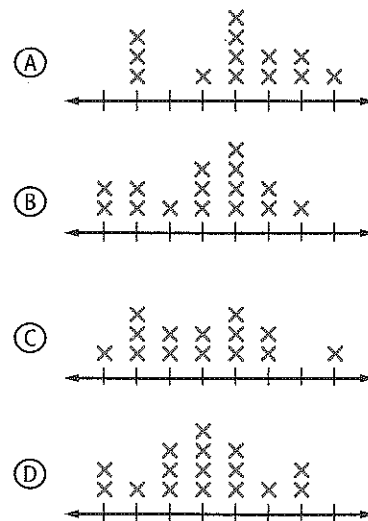
| Day       | High Temperature (°F) |
|-----------|-----------------------|
| Monday    | 75                    |
| Tuesday   | 58                    |
| Wednesday | 72                    |
| Thursday  | 68                    |
| Friday    | 69                    |
| Saturday  | 66                    |

- (A) 4°F
  - (B) 4.8°F
  - (C) 10°F
  - (D) 68°F
47. Noshi found the measures of center and variation of his quiz scores. Which dot plot matches Noshi's description of his quiz scores?

*The mean and range are both 30.*

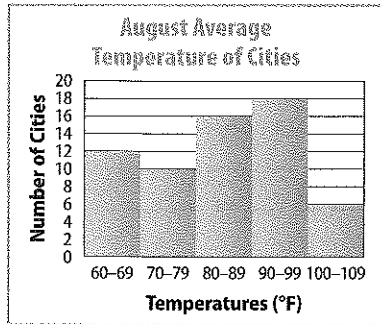
*The mode is 35.*

*The interquartile range is 15.*





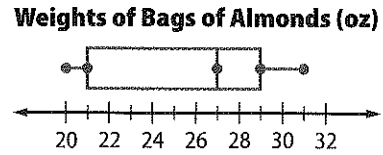
48. For a science project, Michael researched the average monthly temperature for cities in the United States for the month of August. He created a histogram, as shown below, of his findings.



What percent of cities have a monthly temperature of less than 80°F? Round to the nearest tenth.

- (A) 22%
- (B) 35.5%
- (C) 38%
- (D) 61.3%

49. The box plot shows the weights, in ounces, of 15 different bags of almonds. About how many bags contained less than 27 ounces?



- (A) 11 bags
  - (B) 8 bags
  - (C) 4 bags
  - (D) 0 bags
50. What type of data is best represented in a line graph?
- (A) data that show infrequency
  - (B) data that change over time
  - (C) data that are grouped by category
  - (D) data that compare totals