

AR7 Benchmark #2 Review

Name: _____

Class: _____

Date: _____

1. Valeri earned \$12.50 per hour at her summer job.

If she earned \$375 last week, which equation can be used to determine the number of hours (h) Valeri worked?

- A. $12.50 + h = 375$
- B. $12.50h = 375$
- C. $12.50(375) = h$
- D. $12.50 \div 375 = h$

2. Joshua went to a restaurant that offers 5 types of pasta and 3 types of sauce.

How many different choices of 1 pasta and 1 sauce can Joshua order?

- A. 8
- B. 10
- C. 12
- D. 15

3. In a survey, Scott asked 50 people if they voted for the current mayor. He recorded the results in this table.

VOTES FOR MAYOR

Yes	No	Private Decision
22	20	8

Based on the survey, what is the probability the next person will say "No"?

- A. 5%
- B. 20%
- C. 40%
- D. 67%

4. A football player lost 11 yards on a run. He gained 87 yards on the next run. This expression can be used to determine the total change in the number of yards.

$$-11 + 87$$

What is the total change in the number of yards?



5. Add. Reduce your answer to lowest terms.

$$\begin{array}{r} 4\frac{1}{3} \\ + 2\frac{2}{9} \\ \hline \end{array}$$

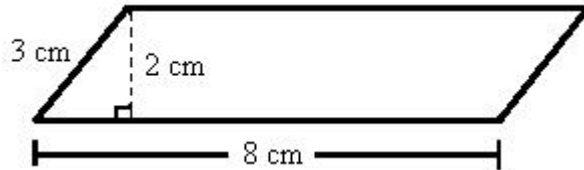
- A. $6\frac{5}{9}$
- B. $7\frac{5}{9}$
- C. $7\frac{1}{4}$
- D. $6\frac{1}{4}$

6. Add.

$$- 21 + (- 7) =$$

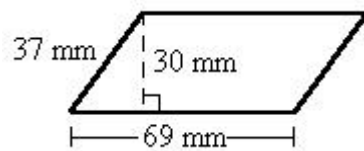
- A. 14
- B. - 14
- C. 28
- D. - 28

7. Find the area of the parallelogram.



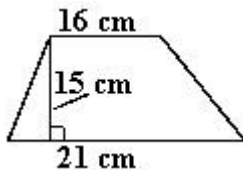
- A. 6 cm^2
- B. 16 cm^2
- C. 24 cm^2
- D. 8 cm^2

8. Find the area of the parallelogram.

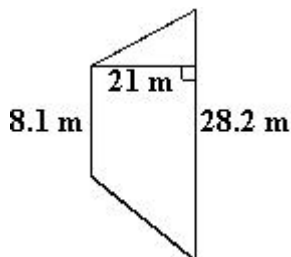


- A. $1,110 \text{ mm}^2$
- B. $2,070 \text{ mm}^2$
- C. $1,035 \text{ mm}^2$
- D. $2,553 \text{ mm}^2$

9. What is the area of the trapezoid?



- A. 277.5 square centimeters
 B. 2,520 square centimeters
 C. 315 square centimeters
 D. 157.5 square centimeters
10. What is the area of the trapezoid?



- A. 10.877 square meters
 B. 381.15 square meters
 C. 592.2 square meters
 D. 2,398.41 square meters
11. Convert -5°F into $^{\circ}\text{C}$. Remember: $C = \frac{5}{9}(F - 32)$.
 Round your answer to the nearest degree, if necessary.
- A. -15°C
 B. -29°C
 C. -21°C
 D. -35°C
12. The thermometer reads 32°F . What is the equivalent Celsius temperature?
 Remember: $C = \frac{5}{9}(F - 32)$.
 Round your answer to the nearest degree, if necessary.
- A. 0°C
 B. -14°C
 C. 36°C
 D. -18°C

13. $275 \div -5 =$

- A. 1375
- B. -1375
- C. -55
- D. 55

14. $(-12 \times 3) \div (6 \times 2) =$

- A. 3
- B. -2
- C. -3
- D. 2

15. Solve for z .

$$63z - 81 = 108$$

- A. $z = 4$
- B. $z = 3$
- C. $z = 1$
- D. $z = 0$

16. Once a week Ignacio picks all the weeds in his front yard. He keeps a record of the number of weeds he picks each week.

Number of Weeds Picked	Number of Weeks
7	III
8	IIII
9	IIII I
10	IIII II
11	IIII III
12	IIII IIII

Based on Ignacio's data, what is the experimental probability that he will pick 9 weeds next week?

- A. $\frac{9}{32}$
- B. $\frac{7}{32}$
- C. $\frac{7}{57}$
- D. $\frac{9}{57}$
17. In the last seven years of school, Taska has had eleven different teachers. Nine of her teachers were female. Based on this information, what is the experimental probability that the next teacher she has will be a male?
- A. $\frac{11}{2}$
- B. $\frac{9}{11}$
- C. $\frac{11}{9}$
- D. $\frac{2}{11}$

18. In the last year, Darrell and Janice went to the movies often. The chart below shows the number of movies they attended this past year.

Number of Movies Seen	Number of Months
0	
2	
3	
5	
7	

Based on this information, what is the experimental probability that they will see three movies next month?

- A. $\frac{1}{2}$
- B. $\frac{3}{1}$
- C. $\frac{1}{3}$
- D. $\frac{4}{17}$
19. Raul performed an experiment by rolling two dice 50 times. Based on his results in the chart below, what is the experimental probability that Raul will roll a 9 on his next roll?

Total on Dice	2	3	4	5	6	7	8	9	10	11	12
Number of Times Rolled	1	3	5	5	8	8	7	8	1	2	2

- A. $\frac{9}{50}$
- B. $\frac{25}{4}$
- C. $\frac{4}{21}$
- D. $\frac{4}{25}$

20. On Monday, x number of people attended the fair. On Tuesday, there were 113 more people than on Monday.

Which of the following expressions correctly represents the number of people that attended the fair on Tuesday?

- A. $x - 113$
- B. $x + 113$
- C. $113 - x$
- D. $x \div 113$

21. What is the value of n in the given statement?

$$5n \leq 425$$

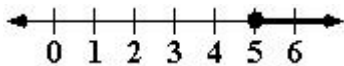
- A. $n < 85$
- B. $n \leq 85$
- C. $n > 85$
- D. $n \geq 85$

22. What is the value of x in the given statement?

$$\frac{x}{8} \geq 9$$

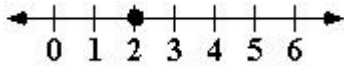
- A. $x \leq 17$
- B. $x \leq 72$
- C. $x \geq 17$
- D. $x \geq 72$

23. Which statement represents the value shown on the number line?



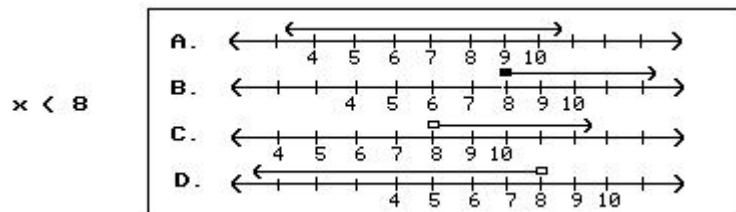
- A. $n = 5$
- B. $n \leq 5$
- C. $n > 5$
- D. $n \geq 5$

24. Which statement represents the value shown on the number line?



- A. $n < 2$
 B. $n \leq 2$
 C. $n = 2$
 D. $n \geq 2$

25. Choose the option which shows the inequality expressed on a number line.



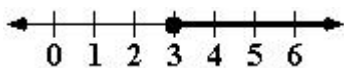
- A. A
 B. B
 C. C
 D. D

26. Solve the inequality.

$$4n \geq 42$$

- A. $n \geq 10.5$
 B. $n \leq 10.5$
 C. $n \geq 168$
 D. $n \leq 168$

27. Which inequality represents the value shown on the number line?



- A. $x > 3$
 B. $x < 3$
 C. $x \geq 3$
 D. $x \leq 3$

28. Solve the inequality.

$$-2x - 14 > -10x + 26$$

- A. $x < 5$
- B. $x > 5$
- C. $x > -1$
- D. $x < -1$

29. $-7 + 3 \cdot (-12) \div (-10 + 6) =$

- A. 12
- B. - 12
- C. 2
- D. - 2

30. Simplify the following expression using the order of operations.

$$(-12x + 10x) \cdot 6^2 - 12x \div 3$$

- A. $- 76x$
- B. $- 28x$
- C. $44x$
- D. $20x$

31. Simplify.

$$(-9 + 7) \cdot 11 - (-5) \cdot 4 =$$

A. - 128

B. - 68

C. - 42

D. - 2

32. $(-6 \times -2) \times (4 \div -2) =$

A. -24

B. -16

C. 24

D. 16

33. The Acme Fencing Company built a fence around a rectangular yard. The yard is 12 meters wide and 45 meters long.

What is the perimeter of the yard?

A. 540 meters

B. 228 meters

C. 57 meters

D. 114 meters

34. Sunjung and Dave built a square sandbox for the neighborhood kids. One side of the sandbox is 15 feet long.

What is the perimeter of the sandbox?

A. 60 feet

B. 225 feet

C. 120 feet

D. 45 feet

35. There are 5 green balls, 2 orange balls, 4 purple balls, and 1 pink ball in a bucket. You pick 1 ball from the bucket (without peeking).

What is the probability that you will pick a purple ball?

A. 4

B. $\frac{1}{3}$

C. $\frac{1}{6}$

D. $\frac{1}{12}$

36. Mike conducted a poll to see how many people liked the food served in the cafeteria. In the poll, Mike found that 13 of the 125 people polled liked the food.
- If there are 700 people in the school, how many people can Mike expect to like the food?
- A. 73 people
 - B. 70 people
 - C. 588 people
 - D. 5.6 people
37. There are 5 boys with blonde hair, 11 boys with brown hair, 6 boys with black hair, 3 boys with red hair, and 2 boys with green hair.
- If you closed your eyes and picked 1 boy, what is the probability that you will pick a boy that does not have brown hair?
- A. $1 \frac{11}{27}$
 - B. $\frac{11}{27}$
 - C. $\frac{16}{27}$
 - D. 0
38. Out of 3 kites in the sky, 2 of them are blue and 1 of them is red. If there are 27 total kites in the sky, how many are expected to be blue based on the information given?
- A. 18
 - B. 9
 - C. 41
 - D. 6
39. A local radio station is having a contest to win a brand new car. They have put a check for \$10,000 in a car that is in a parking lot full of cars. To win the car, you need to have the key to the car. There are six sedans, five sports cars, eight sport utility vehicles, two luxury cars, and seven trucks. What is the probability that the check will not be in a sport utility vehicle?
- A. $\frac{7}{28}$
 - B. $\frac{21}{28}$
 - C. $\frac{5}{7}$
 - D. $\frac{2}{7}$

40. There are 8 blue marbles, 7 red marbles, and 5 green marbles in a bag. What is the probability that, without looking, you will reach in and grab a red marble?

A. $\frac{7}{13}$

B. $\frac{7}{20}$

C. $\frac{13}{20}$

D. $\frac{13}{7}$

41. What is the value of N in the given statement?

$$(3.6 \times 5.2) \times 7.4 = (N \times 7.4)$$

A. 8.8

B. 15.12

C. 17.82

D. 18.72

42. Estimate each decimal to the nearest whole number, and then multiply.

$$57.126 \times 27.739 =$$

A. 1,566

B. 1,539

C. 1,596

D. 1,624

43. Estimate each decimal to the nearest whole number, and then compute the product.

$$12.837 \times 5.596 =$$

A. 78

B. 60

C. 72

D. 65

44. $-12 - (-33) =$

A. - 45

B. 45

C. 21

D. - 21

45. Subtract.

$$10 - (-5) =$$

A. - 5

B. - 15

C. 5

D. 15