

ACT Math Practice – I
Time to complete all questions – 15 minutes
15 questions

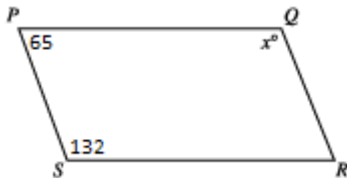
Directions: Solve each problem and choose the correct answer.

Notes:

1. You may use the calculator
2. Illustrative figures are NOT necessarily drawn to scale.
3. Geometric figures lie in a plane.
4. The word line indicates a straight line.
5. The word average indicates arithmetic mean

1. What is the slope of any line parallel to the line $5x + 3y = 8$?
 - A. $-5/3$
 - B. $8/3$
 - C. $5/3$
 - D. 7
 - E. 9
2. When $x = 4$ and $y = 7$, by how much does the value of $3x^2 - 2y$ exceed the value of $2x^2 - 3y$?
 - A. 4
 - B. 14
 - C. 16
 - D. 23
 - E. 50
3. What is the value of x when $3x + 3 = 2x - 4$?
 - A. -7
 - B. $-\frac{1}{5}$
 - C. 1
 - D. $\frac{1}{5}$
 - E. 7
4. What is the greatest common factor of 40, 124, and 220?
 - A. 2
 - B. 4
 - C. 14
 - D. 21
 - E. 42

5. At Paramount Medicals, sales for a business unit were 3 million dollars more the second year than the first, and sales for the third year were double the sales for the second year. If sales for the third year were 40 million dollars, what were sales, in millions of dollars, for the first year?
- A. 16
B. 17
C. 20.5
D. 22
E. 35
6. A tap fills water in a water tank at a speed of $F^2 + 3F - 150$ gallons per minute. If F is the depth of the tank in feet what would be the rate in gallons per minute at which the tap will fill a tank 25 feet deep?
- A. 350
B. 400
C. 850
D. 550
E. 750
7. The length of a shoe box is 5 inches less than twice its width, in inches. Which of the following gives the length in l inches, in terms of the width in w inches, of the shoe box?
- A. $l = 5w + 5$
B. $l = w + 5$
C. $l = w - 5$
D. $l = 2w + 5$
E. $l = 2w - 5$
8. In quadrilateral $PQRS$ below, sides PS and QR are parallel for what value of x ?



- A. 158
B. 132
C. 120
D. 115
E. 70
9. How many irrational numbers are there between 1 and 7?
- A. 1
B. 3
C. 4
D. 10
E. Infinitely many

10. A typical player in Mary's Sports School consumes 64.5 pounds of sugar per year. As part of a new nutrition plan, each member of a baseball team plans to lower the sugar he or she consumes by at least 20% for the coming year. Assuming each baseball member had consumed sugar at the level of a typical player in Mary's High School and will adhere to this plan for the coming year, what is the maximum number of pounds of sugar to be consumed by each baseball team member in the coming year?

- A. 14.8
- B. 44.7
- C. 48.6
- D. 51.6
- E. 66.6

11. If $xy = 155$, $x + y = 36$, and $x > y$, what is the value of $x - y + \frac{xy}{5}$?

- A. 4
- B. 6
- C. 18
- D. 26
- E. 57

12. Grand Cafe has come out with a lunch special offer for \$4.99! Under this offer, each daily lunch special consists of a salad, a soup, a burger, and a drink. A customer can choose from how many different lunch specials?

Salads	Soups	Burgers	Drinks
caesar	mushroom	spicy tuna	tea
capsicum	meatball	chicken delight	coffee
lettuce	veggie	ham with cheese	soda
		ham only	
		Lamb chops	

- A. 30
- B. 50
- C. 95
- D. 125
- E. 135

13. Robert walks from his house to a restaurant. He first walks 5 miles eastwards and then 12 miles northwards to reach the restaurant. About how many miles is the restaurant from the house?

- A. 5
- B. 12
- C. 13
- D. 25
- E. 169

14. Which of the following is a factor of the polynomial $x^2 - x - 6$?

- A. $x - 3$
- B. $2x - 3$
- C. $2x - 5$
- D. $2x + 5$
- E. $3x + 5$

15. A car averages 25 miles per gallon. If gas costs \$4.25 per gallon, which of the following is closest to how much the gas would cost for this car to travel 2,666 typical miles?

- A. \$ 44.44
- B. \$109.08
- C. \$118.80
- D. \$408.04
- E. \$453.22

Answers:

1. A
2. D
3. A
4. B
5. A
6. D
7. D
8. D
9. E
10. D
11. E
12. E
13. C
14. A
15. E