

SAT Prep

Timed Activity: Systems of Equations

Name _____

Date _____

1. If $x + y = 8$ and $x - y = 5$, what is the value of $x^2 - y^2$?
- a) -60 b) -40 c) 20 d) 40 e) 60
2. If $x + y = 8$ and $x - y = 14$, what is the value of $x^2 + y^2$?
- a) 90 b) 98 c) 108 d) 112 e) 130
3. If $p - 2 = q + 2$, then $q - p =$
- a) -4 b) 4 c) 0 d) -2 e) 2
4. If $p = \frac{3q}{8}$ and $q = \frac{2n}{3}$, then $p =$
- a) $\frac{n}{4}$ b) $\frac{9n}{16}$ c) $4n$ d) $\frac{25n}{24}$ e) $2n$
5. If $x - y = 6$ and $z + y = 4$, then x , expressed in terms of z , equals
- a) $-z$ b) $10 - z$ c) $z + 2$
d) $5 - z$ e) $z - 2$
6. If $x^2 = 4$, and $y^2 = 1$ then $(xy)^3 =$
- a) -8 b) 8 c) 16 d) 125
e) It cannot be determined from the information given.
7. If $x + y = A$ and $x - y = B$, then $x =$
- a) A b) $2A + B$ c) $2y$
d) $\frac{B - A}{2}$ e) $\frac{A + B}{2}$
8. In the system of equations
- $$\begin{aligned} x + y &= 4 \\ 3x - y &= 8 \end{aligned}$$
- what is the value of x ?
- a) -4 b) -2 c) 3 d) 4 e) 6
9. If $\frac{6}{a} = 2$ and $3b + a = 15$, then $b =$
- a) 2 b) 3 c) 4 d) $4\frac{1}{3}$ e) 5
10. If $x = \frac{y}{4}$ and $8x = 18$, then $y =$
- a) 9 b) 8 c) 7 d) 5 e) 4
11. If $x = 16 - y$ and $\frac{y}{6} = 3$, then $x =$
- a) -2 b) 2 c) 4 d) 7 e) 13
12. If $x + 4 = 12$ and $x + y = 16$, then $y =$
- a) 0 b) 2 c) 4 d) 8 e) 12

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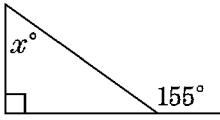
13. If $3a - 5b = 12$ and $a = 3b$, then $a =$
- a) -6 b) 3 c) 6 d) 9 e) 12
14. If $4b - c = 5$ and $3b - 2c = 7$, then $b + c =$
- a) -4 b) -2 c) 0 d) 2 e) 4
15. If $3x + 3y = 18$ and $2x - y = 6$, then $x + y =$
- a) 12 b) 6 c) 4 d) 3 e) 1
16. If $3x = 6y = 72$, then $x + y =$
- a) 4 b) 8 c) 18 d) 24 e) 36
17. If $x^2 - y^2 = 1$ and $x - y = 1$, then $x + y =$
- a) -2 b) -1 c) 0 d) 1 e) 2
18. If $a + b = 9$ and $a - b = 3$, then $a^2 + b^2 =$
- a) 81 b) 75 c) 45 d) 17 e) 9
19. If $x + y = 12$ and $x - y = 8$, then $xy =$
- a) 12 b) 18 c) 20 d) 24 e) 36
20. If $5x + y = 9$ and $y = 4x$, then $x =$
- a) 1 b) 2 c) 3 d) 4 e) 5
21. If $3x + y = 9$ and $1.5x = 3$, then $y =$
- a) 1 b) 2 c) 3 d) 4 e) 5
22. If $x = 3y$ and $y = 4z$, what is the value of z when $x = 600$?
- a) 25 b) 30 c) 40 d) 50 e) 60
23. If n is an odd number, which of the following must be even?
- a) $5n$ b) n^2
c) $2n - n$ d) $n + 2$
e) $(n + 1)(n - 2)$
24. Five pounds of salt cost \$8. What is the cost of 7.5 pounds of salt?
- a) \$10 b) \$12 c) \$15 d) \$16 e) \$20
25. Nine cases of candy bars cost \$24. What is the cost of 13.5 cases of candy bars?
- a) \$18 b) \$30 c) \$33 d) \$36 e) \$42
26. $\frac{2}{4} \times \frac{3}{6} \times \frac{4}{8} \times \frac{5}{10} =$
- a) $\frac{1}{16}$ b) $\frac{1}{8}$ c) $\frac{1}{4}$ d) $\frac{1}{2}$ e) 2

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27. In the figure, $x =$

- a) 35 b) 55 c) 65 d) 70 e) 75

28. On a number line, if the left end point of a segment is at -10 and the midpoint of the segment is at -4 , then the right end point is at

- a) -7 b) -2 c) 0 d) 2 e) 4

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1.
Answer: d
CodePath: EAS.SAT.B.E.3

2.
Answer: e
CodePath: EAS.SAT.B.E.4

3.
Answer: a
CodePath: EAS.SAT.B.E.8

4.
Answer: a
CodePath: EAS.SAT.B.E.10

5.
Answer: b
CodePath: EAS.SAT.B.E.13

6.
Answer: e
CodePath: EAS.SAT.B.E.17

7.
Answer: e
CodePath: EAS.SAT.B.E.19

8.
Answer: c
CodePath: EAS.SAT.B.E.27

9.
Answer: c
CodePath: EAS.SAT.B.E.31

10.
Answer: a
CodePath: EAS.SAT.B.E.33

11.
Answer: d
CodePath: EAS.SAT.B.E.34

12.
Answer: d
CodePath: EAS.SAT.B.E.37

13.
Answer: d
CodePath: EAS.SAT.B.E.39

14.
Answer: b
CodePath: EAS.SAT.B.E.40

15.
Answer: b
CodePath: EAS.SAT.B.E.41

16.
Answer: e
CodePath: EAS.SAT.B.E.42

17.
Answer: d
CodePath: EAS.SAT.B.E.44

18.
Answer: c
CodePath: EAS.SAT.B.E.51

19.
Answer: c
CodePath: EAS.SAT.B.E.55

20.
Answer: a
CodePath: EAS.SAT.B.A.26

21.
Answer: c
CodePath: EAS.SAT.B.A.25

22.
Answer: d
CodePath: EAS.SAT.B.A.29

23.
Answer: e
CodePath: EAS.SAT.D.A.5

24.
Answer: b
CodePath: EAS.SAT.A.D.7

25.
Answer: d
CodePath: EAS.SAT.A.D.8

26.
Answer: a
CodePath: EAS.SAT.A.B.62

27.
Answer: c
CodePath: EAS.SAT.C.B.12

28.
Answer: d
CodePath: EAS.SAT.C.J.5