

Algebra 1 Practice Test

Graph each inequality on a separate number line.

1. $x < 3$
2. $-2 < x \leq 4$

Solve each inequality.

3. $3x + 7 < 5x - 9$
4. $11 - 3x < -4$
5. $-8 < 2x + 6 < 10$

Solve the inequalities and graph the solution sets.

6. $x > -2$ AND $x < 11$
7. $2x - 1 < 17$ AND $3 + x > 4$
8. $x < 1$ OR $x > 6$
9. $4x - 5 < x + 1$ OR $x - 7 > -3$

Decimal Percent x Total = Part

Solve for the missing value.

10. What is 12% of 600?
11. 15 is what percent of 75?
12. 18 is 24% of what number?
13. Emma earned 6.2% commission on a \$45,200 sale. How much did she receive?
14. Academy put Nikes on sale for 20% off. If a pair of Nikes normal cost \$110, how much are they on sale?
15. 15 students went on a field trip. This is 60% of the class. How many people in the whole class?
16. Kohls buys a shirt for \$23 and marks it up 45%. What is the amount of mark up and what is retail the price of a shirt?

Simple Interest = Principal (Annual rate) (Years)

17. Principal = \$5000, Annual Rate = 4.2%, Years = 3. Find the interest.
18. Interest = 2240, Principal = \$17500, Years = 4. Find the annual percentage rate.

Distance = Rate x Time

19. A car drives 62 miles per hour for 3.5 hours. How far does the car go?
20. A horse runs 32 feet per second. How long does it take to travel 5280 feet?
21. Two runners start from the same place, but run in opposite directions. One person runs at a speed of 25 feet per second. The other person runs at 28 feet per second. In how many seconds will they be 3975 feet apart?
22. A cat is watching a squirrel. They are 22 feet apart. When the squirrel sees the cat, it starts to run at 18 feet per second. The cat runs at a speed of 23 feet per second. How many seconds will it take the cat to catch up to the squirrel?
23. You are home and decide to walk to the park. You walk at a rate of 80 meters per minute. After 15 minutes, your brother realizes that you left your phone at home, so he gets on his bike and tries to catch up to you. He rides at a rate of 310 meters per minute. How long will it take him to catch up to you? Round to one decimal place.