

Course: Algebra 1

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Placement Exam Instructions:

Scholé Academy administers placement exams in order to get to know each student and find the best learning environment for him or her, as we seek to educate our students well and wisely. Students should print and complete this placement exam to confirm proper placement in one of our online math courses. Please show ALL of your work neatly and clearly on the exam (or note paper) and make sure each answer is clearly labeled and legible. The test should be completed independently, without help from outside sources (including notes, text, parents, tutors, etc.). This exam is a tool used to help our instructors get to know their students—perfection is not expected! If you have any questions about the exam content, you are welcome to reach out to the course instructor via email. The completed placement test should be scanned (no photographs, please!) and emailed to the course instructor, who will respond with placement confirmation. Please note that registration is not finalized until the student has submitted a placement exam and received confirmation of proper placement from the course instructor.

Algebra 1 Readiness Test

Solve (Express answers as a mixed number when applicable):

1. $-(4+5)$	2. $11 - (-6)$	3. -5×4
4. $10 \div -2$	5. $14 \div \frac{1}{3}$	6. $\frac{1}{2} \div \frac{2}{7}$
7. $(-4)^3$	8. 2^{-2}	9. $12\frac{2}{3} + 9\frac{1}{2}$

10. Which of the following numbers are divisible by 5? Answer without using division.

42,324 140,135 1,340 21,348 61,230,060 123,132

11. Which of the following numbers are divisible by 3? Answer without using division.

42,324 140,135 1,340 21,348 61,230,060 123,132

12. Which of the following numbers are divisible by 4? Answer without using division.

42,324 140,135 1,340 21,348 61,230,060 123,132

13. What is the prime factorization of 252?

Simplify:

14. $\frac{4a^3b}{2ab}$	15. $\frac{36}{27}$	16. $\frac{9600}{12000}$
17. $6x + 2(4-3x)$	18. $\frac{3x+4}{6} - \frac{7-3x}{9}$	19. $-5(2-15x) + 12(7x+3)$

Solve:

20. $-\frac{2r}{7} = \frac{8}{3}$	21. $4x = -32$	22. $3(7-2y) \geq 2y - 3$
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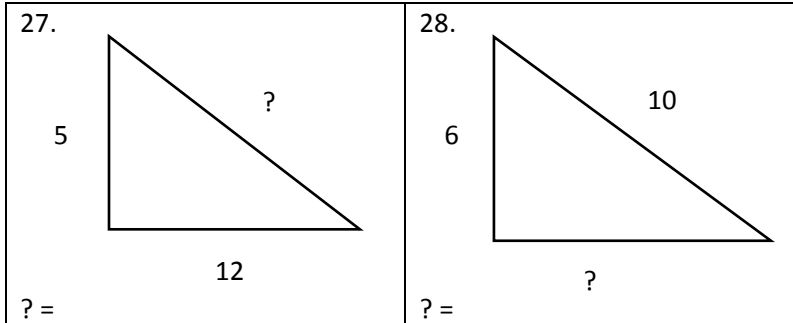
23. The mystery bag contains 25% movie tickets, 14% pizza tickets, 20% arcade tickets, 27% ice cream tickets, and 14% bowling tickets. On Friday, the student with the highest grade on the math test will randomly select a ticket from the mystery bag. Write an equation that shows the probability that the student selects a movie ticket if there are 175 total tickets in the bag.

24. The sun is approximately 93,000,000 miles from earth. Express this number in scientific notation.

25. I have a baseball game after school today. I get out of school at 3:30 pm and the baseball game starts at 4:30 pm. My school is 36 miles away from the baseball field. How fast will my parents need to drive to get me to my game 15 minutes early? Assume they leave the school at exactly 3:30 pm.

26. Write an expression for the n th term of the following sequence: 3, 4, 5, 6, ... ($n=1$ for the first term)

Find the missing value



29. Stephan Curry is an NBA basketball player. He makes about 90% of his free throws. If he shoots 75 free throws, what is the best estimate of the number of free throws he will make?

30. Melissa, an aspiring fashion designer, ordered a large package of sewing needles. While inspecting the package, Melissa found that 7 out of every 24 needles were bent. If the package contains a total of 264 needles, about how many should she expect to be bent?