



# Individual Test 5th/6th

1	Luke Skywalker has 32 sticks of gum. Han Solo has 29 sticks of gum. How many sticks do they have in total?
2	King Arthur had \$482.43 but donated \$117.23 to his peasants. How much of his money remains?
3	Evaluate: $301 \div 7$
4	Homer eats a dozen one-dozen boxes of donuts per day. How many donuts does he eat each day?
5	Find the next number in the pattern. 5, 8, 11, 14 ...
6	21 is 30% of what number?
7	What is $\frac{1}{2}$ of $3\frac{3}{8}$ ? (Express your answer as a common fraction.)
8	Ash Ketchum has 42 pets, all of which are cats, dogs, or birds. If he has seven birds, and there are four cats for every one dog, how many dogs does he have?
9	Hermione Granger can read 900 words per minute. If there are 450 words on each page of her book, how many minutes will it take her to read 118 pages?
10	Evaluate: $\frac{1}{2} + \frac{2}{5} + \frac{5}{6}$ (Express your answer as a mixed number.)
11	Sir Gawain constructs a solid stack of blocks two blocks long, four blocks wide, and three blocks tall. Sir Lancelot takes away half the blocks. How many blocks remain in the stack?
12	How many seconds are there in one hour and sixteen minutes?
13	Evaluate $2.009 \times 1.7$ (Express your answer as a decimal rounded to the nearest hundredth.)
14	Which of the following is the smallest, $1.35$ , $\frac{4}{3}$ , $1 + \frac{4}{7}$ , or 70% of 2?
15	What is the sum of the median and the mode of these data? {9, 1, 8, 5, 1 }
16	How many of the following statements are true? (i) Some isosceles triangles are scalene. (ii) All equilateral triangles have obtuse angles. (iii) No right triangle is scalene.
17	If Lois Lane drives 30 miles in 40 minutes and then 12 miles in 20 minutes, what is her average speed for the entire trip, in miles per hour?
18	This year, King Leonidas's birthday falls on a Tuesday. On what day will his birthday fall next year if two years ago was a leap year?
19	Darth Vader administers a difficult 75-question multiple choice chemistry test. Shawn, who does not know anything about chemistry, guesses on each question. Each question has exactly four incorrect answer choices, and only one correct answer choice. How many questions should he expect to get correct?
20	Bruce Wayne has \$20.09 to spend online. If each widget costs \$2.95 and he must pay \$5.99 shipping for his entire order, what is the maximum number of widgets he can buy?

21	Evaluate: $5 + 2 \times (4 - 6 \div 2 - (3 \times 2^2 - 9))$
22	Mario has a 50% chance of gaining star power. Luigi has a 20% chance of gaining star power. If $a$ is the probability that only one of them will gain star power, and $b$ is the probability that at least one of them will gain star power, evaluate the product $ab$ . (Express your answer as a common fraction.)
23	Jim Raynor rides on his motorcycle from a bunker to the Command Center at 100 kilometers per hour to warn of an impending zerg rush. Then, he rides back to the bunker at 80 kilometers per hour. What is his average speed for the roundtrip ride, in kilometers per hour? (Express your answer as an improper fraction.)
24	0.12345678912 ... is a repeating decimal. What is its 2009 <sup>th</sup> digit to the right of the decimal point?
25	Through which quadrant does the graph of $2x + y = 6$ NOT pass?
26	The ratio of apples to bananas is 2: 3. The ratio of bananas to cranberries is 3: 4. The number of mangoes is equal to the combined total of apples and cranberries. The number of pineapples is equal to the number of bananas. What is the ratio of pineapples to mangoes? (Express your answer as a ratio in the form $a: b$ .)
27	How many even prime numbers are less than half of 2009?
28	How many integer factors does 12 have?
29	How many diagonals can be drawn in an irregular, convex nonagon (9-gon)?
30	What is the exact circumference, in cm, of a circle with area $49\pi$ square centimeters?
31	The product of two negative numbers is 102. If they differ by 11, what is their sum?
32	What is the perimeter, in inches, of a right triangle with legs measuring 24" and 10"?
33	What is the measure, in degrees, of any interior angle of a regular pentagon?
34	Find the total area of four equilateral triangles each with the side length of one centimeter. (Express your answer in simplest radical form.)
35	Write the equation of the line of symmetry of the parabola described by the equation $x^2 + 6x - 4 = y + 23$
36	When Gambit draws a card from a standard 52-card deck, what is the probability that it is an ace, a king, and/or a spade?
37	What is the result when the point (5, 8) is reflected across the line $x = -3$ ? (Express your answer as an ordered pair in the form $(x, y)$ .)
38	Oliver Queen has a jar of 8 identical gumballs, except half are red and half are green. If he picks four gumballs at random without replacement, what is the probability that he will have more red gumballs than green gumballs? Express your answer as a reduced fraction.
39	The "Knight mean" of a set is defined as the product of the members in a set divided by the number of members in that set. If the "Knight mean" of { 4096, 2048, 512, 256, 128, 32, 16, 4 } is equal to $x \times 4^{24}$ , evaluate $x$ .
40	If $a$ and $b$ are the two smallest consecutive positive integers whose respective positive divisors have equal sums, evaluate $a + b$ .