



巩固练习：

(1) $9 - 2/x = 5$, 求 x

(2) $\frac{2x^2}{9} = 18$, 求 x

(3) $\frac{3}{10} + \frac{3}{15} =$

(4) $\frac{\frac{5}{9} \times \frac{3}{10}}{3} =$

(5) $\frac{5^2}{9} \times \frac{3^2}{10} \times \frac{2^2}{7} \times \frac{7^2}{5} \times \frac{13^2}{9} \times \frac{9^2}{13} =$

(6) $\frac{6/9}{5/2} =$

(7) $4^{3^2} =$

(8) $\frac{4^3 + 4^2}{2^8} =$

(9) 化简: $(a - b) / a = ?$

(10) 化简: $\frac{(m+6)*(m-6)}{12-2m} =$

(11) 化简: $(2 - x) * (4 + x^2) * (2 + x) =$

(12) 化简: $-2(4 - x) =$

(13) 化简: $(t + 5)^3 - t^3 =$

(14) 化简: $a^2 (b^3 / \sqrt{(ac)^4}) =$

(15) 化简: $(k + 5)^2 - (k - 2)^2 =$

(16) x 和 y 同时满足: $x + y = 8, 2x + 4y = 22$, 求 x, y



You

能否讲一个很短小的数学历史上的小故事，以激发孩子对数学学习的兴趣



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Certainly! One of the most captivating stories in the history of mathematics is about the ancient Greek mathematician, Archimedes, and his "Eureka!" moment.

Archimedes was given the task of determining whether a crown made for King Hiero II was made of pure gold, without damaging it. This seemed impossible at first, as he needed a non-invasive method to measure the crown's density to compare it with that of pure gold.

The story goes that while taking a bath, Archimedes noticed the amount of water that overflowed was equal to the volume of his body that was submerged. This observation led to his sudden insight on how to solve the problem. He realized he could use water displacement as a way to measure the volume of the crown, and then, by comparing it to its weight, determine its density. If the density was lower than that of pure gold, this would mean the crown was not made of pure gold alone.

Excited by his discovery, Archimedes supposedly leaped out of the bath and ran through the streets naked, shouting "Eureka!" which means "I have found it!" in Greek. This method allowed him to prove that the crown was indeed a fraud without causing any damage to it.

This story is not only a testament to Archimedes' genius but also illustrates a fundamental principle in physics and mathematics, known as Archimedes' principle. It's a great example to show how curiosity and observation can lead to significant discoveries in mathematics and science.



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当然可以！数学史上最吸引人的故事之一是关于古希腊数学家阿基米德和他的“尤里卡（Eureka）！”时刻的。

阿基米德被赋予了一个任务，需要确定为希罗二世国王制作的皇冠是否是纯金的，同时又不能对它造成任何损伤。起初这看似不可能，因为他需要一种非侵入式的方法来测量皇冠的密度，以便与纯金的密度进行比较。

故事讲述，在洗澡时，阿基米德注意到溢出的水量等于他身体浸入水中部分的体积。这一观察引发了他的突然洞见，以解决这个问题。他意识到可以使用水位移法来测量皇冠的体积，然后通过比较其重量，来确定其密度。如果密度低于纯金的密度，这将意味着皇冠不仅仅是由纯金制成的。

阿基米德对他的发现感到兴奋，据说他从浴缸中跳出来，赤身裸体地跑过街道，大喊“尤里卡！”这在希腊语中意味着“我找到了！”。这种方法让他能够证明皇冠确实是个赝品，而且没有对其造成任何损害。

这个故事不仅见证了阿基米德的天才，也展示了物理学和数学中的一个基本原理，被称为阿基米德原理。这是一个展示好奇心和观察如何导致数学和科学中重大发现的绝佳例子。