Additional Problems: Rational & Irrational Numbers

**Sums & Products of Rational and Irrational Numbers**

1. What type of number will result from the sum of 3/4 and √36?
   1. Rational
   2. Irrational
   3. Whole number
   4. Zero
2. What type of number will result from the sum of 5/6 and √49?
   1. Rational
   2. Irrational
   3. Whole number
   4. Zero
3. Imani, Ozzy, and Amari are calculating the product of √9 and 5/6. Imani says the answer is irrational because both numbers are irrational. Ozzy says the answer is rational because both numbers are rational. Amari says the answer is irrational because one number is rational and the other number is irrational. Who is correct?
   1. Imani
   2. Ozzy
   3. Amari
4. Ahmed, Emma, and Koa are calculating the product of √8 and 4/5. Ahmed says the answer is irrational because both numbers are irrational. Emma says the answer is rational because both numbers are rational. Koa says the answer is irrational because one number is rational and the other number is irrational. Who is correct?
   1. Ahmed
   2. Emma
   3. Koa
5. Find the product of √15 and 3/4. What type of number is it?
   1. 2.9047…;an irrational number
   2. 2.9047…;a rational number
   3. 3.3541…;an irrational number
   4. 3.3541…;a rational number
6. Find the product of √18 and 2/3. What type of number is it?
   1. 3.4641…;an irrational number
   2. 3.4641…;a rational number
   3. 2.8284…;an irrational number
   4. 2.8284…;a rational number
7. A rational number can be expressed as the ratio of two integers, where the denominator is not zero. Given the rational number 2/3 and the irrational number √2, find their sum.
8. The sum of a rational number and an irrational number is always irrational. Given the rational number 3/5 and the irrational number √5, find their sum. Prove that the result is an irrational number.
9. A rational number can be expressed as the ratio of two integers, where the denominator is not zero. Given the rational number 2/3 and the irrational number √2, find their product.
10. The product of a nonzero rational number and an irrational number is always irrational. Given the rational number 3/5 and the irrational number √5, find their product. Prove that the result is an irrational number.