

PRACTICE QUIZ KEY



What is this component? resistor  
 What does this component do in a circuit? resists (slows down) flow of current  
 Does the polarity of this component matter? yes / (no) If yes, which side is negative? \_\_\_\_\_

You also must know how to read them:

**How to find the value of a resistor:** Turn it so the gold band is last, & find the resistor decoding info. on your equation sheet

The 1<sup>st</sup> band color gives you the 1<sup>st</sup> **digit**. Write down that digit.

The 2<sup>nd</sup> band color gives you the 2<sup>nd</sup> **digit**. Write down that digit.

The 3<sup>rd</sup> band color tells you what to multiply those 2 digits by, so go over to the **multiplier** column.

The 4<sup>th</sup> band is the **tolerance**, or how accurate it is. Most of our resistors will have gold as their last band meaning the actual value of it is  $\pm 5\%$  of what you found its value to be.

**Example 1** Let's say you have a resistor that is yellow, red, brown, gold.  
 This tells you that it's value is  $4 \quad 2 \quad \times 10 = 420 \Omega \pm 5\%$

**Example 2** If you need a resistor that has a value of  $530,000 \Omega \pm 5\%$ , the colors it would be are green (for the 5), orange (for the 3), then yellow (because you need to multiply the 53 by 10,000), then gold (for the  $\pm 5\%$ ).

So if you had a resistor that was violet, white, red, gold, what would its value be? 7,900 + 5%  $\Omega$

If you need to find a 60K resistor which is  $60,000 \Omega + 5\%$ , what color stripes would it have?

blue, black, orange, gold



What is this component? ceramic capacitor  
 What does this component do in a circuit? stores charge  
 Does the polarity of this component matter? yes / (no) If yes, which side is negative? \_\_\_\_\_



What is this component? electrolytic capacitor  
 What does this component do in a circuit? stores charge  
 Does the polarity of this component matter? (yes) / no If yes, which side is negative? the shorter leg



What is this component? diode  
 What does this component do in a circuit? conductor in one direction, insulator in the other  
 Does the polarity of this component matter? (yes) / no If yes, which side is negative? the side w/the stripe



What is the short name for this component? LED What does it stand for? light emitting diode  
 What does this component do in a circuit? conductor in one direction, insulator in the other and a light!  
 Does the polarity of this component matter? (yes) / no If yes, which side is negative? the shorter leg



What is this component? transistor  
 What does this component do in a circuit? Used as a switch  
 Does the polarity of this component matter? (yes) / no If yes, which side is negative? line up the flat side



What is this component? integrated circuit (spider)  
 What does this component do in a circuit? an entire circuit on its own  
 Does the polarity of this component matter? (yes) / no If yes, which side is negative? the notch or dot