Identifying Resistors Exercises

For each Resistor, determine the resistance value from the coloured bands shown:

Question 1

Resistance = ?

Question 2

Resistance = ?

Question 3

Resistance = ?

Question 4

Resistance = ?

Question 5

Resistance = ?

Question 6

Resistance = ?

Question 7

Resistance = ?

Question 8

Resistance = ?

Question 9

Resistance = ?

Question 10

For the two power resistors shown, determine the resistance and tolerance

White Resistor

Resistance = ?

Tolerance = ?

Gold Resistor

Resistance = ?

Tolerance = ?

Question 11

What coloured bands would be shown on a resistor with a value of 100 Ω ± 10%?

Band 1 colour:

Band 2 colour:

Band 3 colour:

Band 4 colour:

Question 12

What coloured bands would be shown on a resistor with a value of 47 Ω ± 5%?

Band 1 colour:

Band 2 colour:

Band 3 colour:

Band 4 colour:

Question 13

What coloured bands would be shown on a resistor with a value of 1.2 Ω ± 10%?

Band 1 colour:

Band 2 colour:

Band 3 colour:

Band 4 colour:

Question 14

What coloured bands would be shown on a resistor with a value of 10k Ω ± 5%?

Band 1 colour:

Band 2 colour:

Band 3 colour:

Band 4 colour:

Question 15

Write out the resistor values shown using the BS8152 code as a value and a tolerance

E.g. 10KJ = 10,000 Ω ± 5%

a) 4K7K =

b) 39RJ =

c) 6R8J =

d) 2M2M =

e) 270KK =

Question 16

Write the following resistor values in BS8152 format

E.g. 3300 Ω ± 5% = 3K3J

a) 120 Ω ± 5% =

b) 9100 Ω ± 10% =

c) 12,000 Ω ± 10% =

d) 330,000 Ω ± 5% =

e) 1200,000 Ω ± 20% =

Question 17

Write out the 3 digit codes for surface mounted resistor values as a standard resistance value

E.g. 103 = 10,000 Ω

a) 224 =

b) 471 =

c) 680 =

d) 502 =

e) 392 =

Question 18

Write out the following resistance values using a 3 digit code

E.g. 240 Ω = 241

a) 1200 Ω =

b) 56,000 Ω =

c) 22 Ω =

d) 1000 Ω =

e) 6800,000 Ω =

Identifying Resistors Answers

1. Red Red Red — Resistance: 2200 Ω = 2.2 kΩ = 2k2 Ω
2. Orange White Red — Resistance: 3900 Ω = 3.9 kΩ = 3k9 Ω
3. Yellow Violet Green — Resistance: 4700000 Ω = 4.7 MΩ = 4M7 Ω
4. Brown Green Brown — Resistance: 150 Ω
5. Brown Red Orange — Resistance: 12000 Ω = 12 kΩ
6. Blue Gray Green — Resistance: 6800000 Ω = 6.8 MΩ = 6M8 Ω
7. Gray Red Orange — Resistance: 82000 Ω = 82 kΩ
8. Orange Orange Yellow — Resistance: 330000 Ω = 330 kΩ
9. Blue Gray Brown — Resistance: 680 Ω
10. White Resistor — Resistance: 1.0 Ω ± 10%

    Gold Resistor — Resistance: 100 Ω ± 5%
11. 100 Ω ± 10% — Brown Black Brown Silver
12. 47 Ω ± 5% — Yellow Violet Black Gold
13. 1.2 Ω ± 10% — Brown Red Gold Silver
14. 10k Ω ± 5% — Brown Black Orange Gold
15. a) 4K7K = 4700 Ω ± 10%
    b) 39RJ = 39 Ω ± 5%
    c) 6R8J = 6.8 Ω ± 5%
    d) 2M2M = 2200,000 Ω ± 20%
    e) 270KK = 270,000 Ω ± 10%
16. a) 120 Ω ± 5% = 120RJ
    b) 9100 Ω ± 10% = 9K1K
    c) 12,000 Ω ± 10% = 12KK
    d) 330,000 Ω ± 5% = 330KJ
    e) 1200,000 Ω ± 20% = 1M2M

17. a) 224 = 220,000 Ω

b) 471 = 470 Ω

c) 680 = 68 Ω

d) 502 = 5000 Ω

e) 392 = 3900 Ω

18. a) 1200 Ω = 122

b) 56,000 Ω = 563

c) 22 Ω = 220

d) 1000 Ω = 102

e) 6800,000 Ω = 685