

Finding the Equation of Tangents to Circles

1. Find the equation of the tangent to $x^2 + y^2 = 25$ at the point (3,4).
2. Find the equation of the tangent to $x^2 + y^2 = 25$ at the point (4,3).
3. Find the equation of the tangent to $x^2 + y^2 = 25$ at the point (-4, -3).
4. Find the equation of the tangent to $x^2 + y^2 = 25$ at the point (4, -3).
5. Find the equation of the tangent to $x^2 + y^2 = 100$ at the point (8, -6).
6. Find the equation of the tangent to $x^2 + y^2 = 52$ at the point (4, -6).
7. Find the equation of the tangent to $x^2 + y^2 = 72$ at the point (6, -6).
8. Find the equation of the tangent to $x^2 + y^2 = 98$ at the point (7, -7).
9. Find the equation of the tangent to $x^2 + y^2 = 98$ at the point (-7, -7).
10. Find the equation of the tangent to $x^2 + y^2 = 49$ at the point (-7,0).
11. Find the equation of the tangent to $x^2 + y^2 = 49$ at the point (0, -7).
12. Find the equation of the tangent to $x^2 + y^2 = 7$ at the point (0, $-\sqrt{7}$).

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ANSWERS

$$1. y = -\frac{3}{4}x + \frac{25}{4}$$

$$2. y = -\frac{4}{3}x + \frac{25}{3}$$

$$3. y = -\frac{4}{3}x - \frac{25}{3}$$

$$4. y = \frac{4}{3}x - \frac{25}{3}$$

$$5. y = \frac{4}{3}x - \frac{50}{3}$$

$$6. y = \frac{2}{3}x - \frac{26}{3}$$

$$7. y = x - 12$$

$$8. y = x - 14$$

$$9. y = -x - 14$$

$$10. x = -7$$

$$11. y = -7$$

$$12. y = -\sqrt{7}$$

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