

Circles

Review 11

Name _____

Choose true or false.

#1) T

The circle $(y+7)^2 + x^2 = 12$ has a center of (0,-7).

#2) T

The circle $(y+1)^2 + (x-3)^2 = 25$ has a center of (3,-1).

#3) T

The circle $(y-5)^2 + (x-9)^2 = 7$ has a radius of $\sqrt{7}$.

#4) T

The circle $(x+1)^2 + (y+2)^2 = 24$ has a center of (-1,-2).

#5) T

The circle $(x-5)^2 + (y-9)^2 = 4$ has a radius of 2.

#6) B

Which equation represents a circle centered at C (-3,8) with a radius of 7 cm?

A. $x^2 + y^2 = 7$

B. $(x+3)^2 + (y-8)^2 = 49$

C. $(x-3)^2 + (y+8)^2 = 49$

D. $-3x^2 + 8y^2 = 49$

#7) D

Which equation represents a circle centered at C (0,-2) with a radius of 3 cm?

A. $x^2 + (y-2)^2 = 9$

B. $(x+2)^2 + y^2 = 9$

C. $(y+2)^2 = 9$

D. $x^2 + (y+2)^2 = 9$

#8) B

Which equation represents a circle centered at C (3,-1) with a radius of 8 cm?

A. $(x-3)^2 + (y+1)^2 = 8$

B. $(x-3)^2 + (y+1)^2 = 64$

C. $(x+3)^2 + (y-1)^2 = 8$

D. $(x+3)^2 + (y-1)^2 = 64$

#9) A

Which equation represents a circle centered at C (-3,5) with a radius of $\sqrt{5}$ cm?

A. $(x+3)^2 + (y-5)^2 = 5$

B. $(x+3)^2 + (y-5)^2 = \sqrt{5}$

C. $(x-3)^2 + (y+5)^2 = 5$

D. $(x+3)^2 + (y-5)^2 = 25$

#10) C

Determine the circle that has radius that is between 5 and 7 cm.

A. $x^2 + (y-3)^2 = 18$

B. $(x-8)^2 + (y-9)^2 = 5.5$

C. $x^2 + y^2 = 38$

D. $(x-12)^2 + (y+2)^2 = 8$

#11) C

Determine the circle that has radius that is between 10 and 13 cm.

A. $(x-2)^2 + (y+8)^2 = 11$

B. $(x-1)^2 + (y-3)^2 = 225$

C. $x^2 + (y-3)^2 = 121$

D. $(x-1)^2 + (y-2)^2 = 98$

#12) D

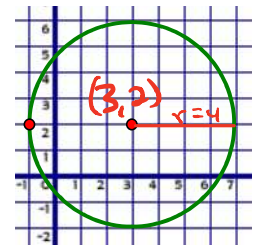
What is the equation of the circle on the graph?

A. $(x-2)^2 + (y-3)^2 = 16$

B. $(x-3)^2 + (y-2)^2 = 4$

C. $(x+3)^2 + (y+2)^2 = 16$

D. $(x-3)^2 + (y-2)^2 = 16$



#13) D

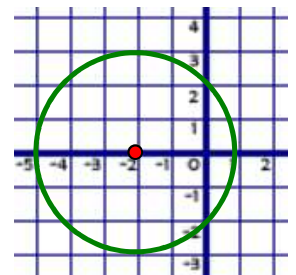
What is the equation of the circle on the graph?

A. $x^2 + (y-2)^2 = 9$

B. $(x+2)^2 + y^2 = 3$

C. $x^2 + (y+2)^2 = 9$

D. $(x+2)^2 + y^2 = 9$



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#14) _____

Which of these equations is equivalent to

$$x^2 + y^2 + 4x - 16y + 52 = 0? \quad (x^2 + 4x + 4) + (y^2 - 16y + 64) = -52 + 4 + 64$$

A. $(x+2)^2 + (y-8)^2 = 16$

B. $(x+4)^2 + (y-8)^2 = 16$

C. $(x+2)^2 + (y-8)^2 = 120$

D. $(x-2)^2 + (y+8)^2 = 16$

$$(x+2)^2 + (y-8)^2 = 16$$

#15) C

Which of these equations is equivalent to

$$x^2 + y^2 - 3x - 8y - \frac{7}{4} = 0? \quad (x^2 - 3x + (\frac{3}{2})^2) + (y^2 - 8y + 16) = \frac{7}{4} + (\frac{3}{2})^2 + 16$$

A. $(x - \frac{3}{2})^2 + (y - 4)^2 = 17\frac{3}{4}$

B. $(x + \frac{3}{2})^2 + (y + 4)^2 = 4$

C. $(x - \frac{3}{2})^2 + (y - 4)^2 = 20$

D. $(x - \frac{3}{2})^2 + (y - 4)^2 = 19.5$

$$(x - \frac{3}{2})^2 + (y - 4)^2 = \frac{7}{4} + \frac{9}{4} + \frac{64}{4}$$

$$(x - \frac{3}{2})^2 + (y - 4)^2 = \frac{80}{4}$$

$$(x - \frac{3}{2})^2 + (y - 4)^2 = 20$$

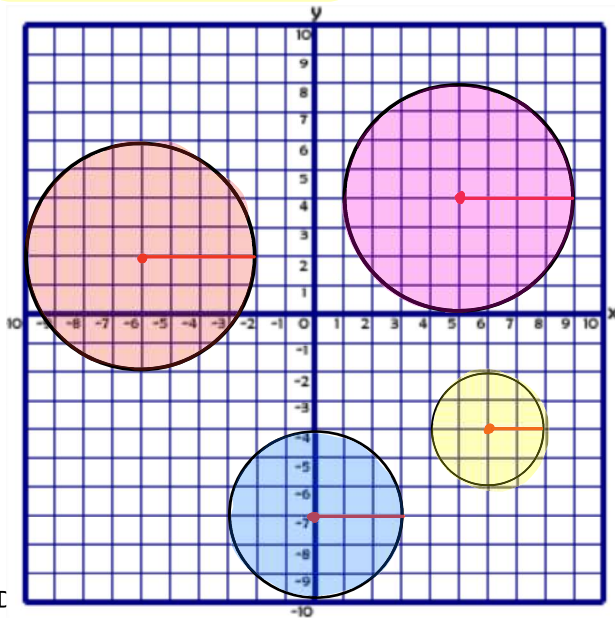
Graph the following circles.

#16) $(x-5)^2 + (y-4)^2 = 16$

#17) $x^2 + (y+7)^2 = 9$

#18) $(x+6)^2 + (y-2)^2 = 16$

#19) $(x-6)^2 + (y+4)^2 = 4$



#20) $x^2 + y^2 - 9x - 7y = \frac{14}{4}$

$$(x^2 - 9x + (\frac{9}{2})^2) + (y^2 - 7y + (\frac{7}{2})^2) = \frac{14}{4} + (\frac{9}{2})^2 + (\frac{7}{2})^2$$

$$(x - \frac{9}{2})^2 + (y - \frac{7}{2})^2 = \frac{14}{4} + \frac{81}{4} + \frac{49}{4}$$

$$(x - \frac{9}{2})^2 + (y - \frac{7}{2})^2 = \frac{144}{4}$$

$$(x - \frac{9}{2})^2 + (y - \frac{7}{2})^2 = 36$$

Center $(\frac{9}{2}, \frac{7}{2})$ Radius = 6

#21) $x^2 + 2x + y^2 = -4x + 4y + 2$

$$x^2 + 6x + y^2 - 4y = 2$$

$$(x^2 + 6x + 9) + (y^2 - 4y + 4) = 2 + 9 + 4$$

$$(x+3)^2 + (y-2)^2 = 15$$

Center $(-3, 2)$ Radius = $\sqrt{15}$