

Final Practice Test

Period _____

Simplify each expression.

1) $(11 - 3x) - (5x - 9)$

- A) $-8x + 18$ B) $8x + 18$
 C) $-8x + 1$ D) $8x - 1$

2) $(-3x - 5)(9x + 4)$

- A) $27x^2 - 57x - 20$
 B) $-27x^2 - 57x - 20$
 C) $-27x^2 + 33x - 20$
 D) $-27x^2 - 33x - 20$

Simplify.

3) $\sqrt{128p}$

- A) $5\sqrt{7p}$ B) $8\sqrt{2p}$
 C) $3\sqrt{2p}$ D) $7p\sqrt{3}$

5) $\sqrt{2} \cdot \sqrt{6}$

- A) $2\sqrt{3}$ B) 12
 C) $2\sqrt{2}$ D) $\sqrt{30}$

4) $-2\sqrt{6} - 3\sqrt{5} - 3\sqrt{5}$

- A) $-2\sqrt{6} - 6\sqrt{5}$ B) $-6\sqrt{5}$
 C) $-3\sqrt{5} - 2\sqrt{6}$ D) $-2\sqrt{6}$

Write each expression in exponential form.

6) $(\sqrt[4]{3n})^3$

- A) $(6n)^{\frac{2}{3}}$ B) $n^{\frac{4}{3}}$
 C) $n^{\frac{5}{3}}$ D) $(3n)^{\frac{3}{4}}$

Evaluate each function.

7) $g(n) = n^2 - 2n$; Find $g(-2)$

- A) 3 B) 8
 C) 15 D) 48

Simplify.

8) $(3 + 7i) - (6 + 8i)$

- A) $-15 - 17i$ B) $-2 - i$
 C) $9 + 15i$ D) $-3 - i$

9) $(-7 + 3i)(3 - 5i)$

- A) $-36 - 26i$ B) $36 - 26i$
 C) $-9 + 49i$ D) $-6 + 44i$

Solve each equation.**Methods: Factoring, completing the square, taking square roots, quadratic formula**

10) $n^2 + 3n - 18 = 0$

- A) $\{-6, 3\}$ B) $\{6, -3\}$
 C) $\{5, 3\}$ D) $\{5, -1\}$

11) $n^2 + 12n - 54 = 0$

- A) $\{11, -7\}$
 B) $\{-6 + 3\sqrt{10}, -6 - 3\sqrt{10}\}$
 C) $\{8 + 3\sqrt{14}, 8 - 3\sqrt{14}\}$
 D) $\{10, -2\}$

12) $36n^2 = 64$

- A) $\{2\}$ B) $\{2, -2\}$
 C) $\{1, -1\}$ D) $\{\frac{4}{3}, -\frac{4}{3}\}$

13) $6b^2 + 2b + 5 = 0$

A) $\left\{ \frac{1 + \sqrt{31}}{6}, \frac{1 - \sqrt{31}}{6} \right\}$

B) $\left\{ \frac{3}{2}, -\frac{10}{3} \right\}$

C) $\left\{ \frac{-1 + \sqrt{31}}{6}, \frac{-1 - \sqrt{31}}{6} \right\}$

D) $\left\{ \frac{-1 + i\sqrt{29}}{6}, \frac{-1 - i\sqrt{29}}{6} \right\}$

14) $4b^2 + 8b - 45 = 0$

A) $\left\{ 4 + \sqrt{61}, 4 - \sqrt{61} \right\}$

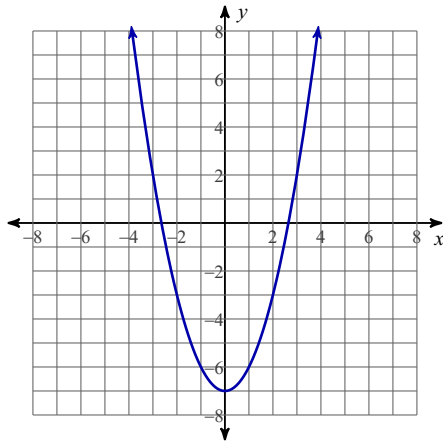
B) $\left\{ \frac{-4 + \sqrt{61}}{4}, \frac{-4 - \sqrt{61}}{4} \right\}$

C) $\left\{ \frac{-2 + i\sqrt{41}}{2}, \frac{-2 - i\sqrt{41}}{2} \right\}$

D) $\left\{ \frac{5}{2}, -\frac{9}{2} \right\}$

Select the correct equation for the graph. (Hint: What transformation is it?)

15)



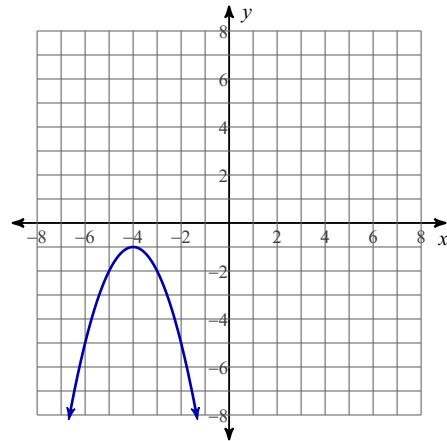
A) $y = x^2 - 7$

B) $y = x^2 + 7$

C) $y = (x - 7)^2$

D) $y = (x + 7)^2$

16)



A) $y = -(x - 4)^2 - 1$

B) $y = -(x + 4)^2 - 1$

C) $y = -(x - 4)^2 + 1$

D) $y = -(x - 1)^2 - 4$

Solve each equation.

17) $|x - 3| = 4$

A) $\{9, -17\}$

B) $\{24, -4\}$

C) $\{7, -1\}$

D) $\{7, -7\}$

18) $|7 + r| = 10$

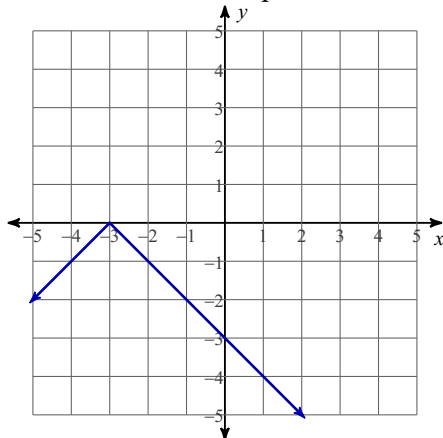
A) $\{3, -17\}$

B) $\{3\}$

C) $\{1, -7\}$

D) $\{-8, -12\}$

19) Select the correct equation for the graph.



A) $|x - 3|$

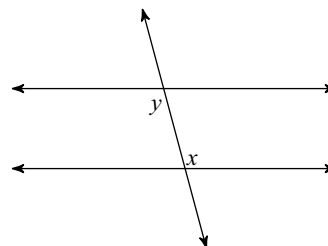
B) $|x + 3|$

C) $-|x| - 3$

D) $-|x + 3|$

Identify each pair of angles as corresponding, alternate interior, alternate exterior, same-side interior, vertical, or adjacent.

20)



A) alternate interior

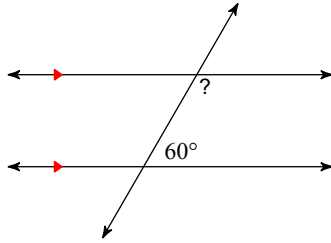
B) corresponding

C) same-side interior

D) alternate exterior

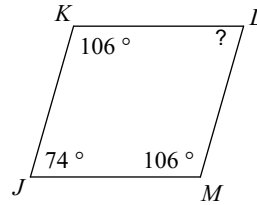
Find the measure of each angle indicated.

21)



- A) 122° B) 140°
 C) 120° D) 110°

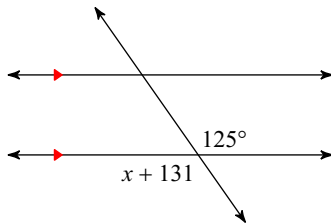
22)



- A) 40° B) 74°
 C) 105° D) 60°

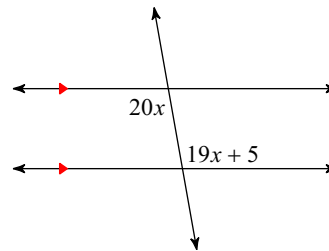
Solve for x .

23)



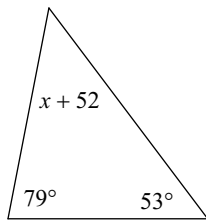
- A) 7 B) -8
 C) -6 D) 11

24)



- A) 8 B) 4
 C) 7 D) 5

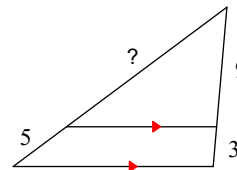
25)



- A) 4 B) 11
 C) -5 D) -4

Find the missing length indicated.

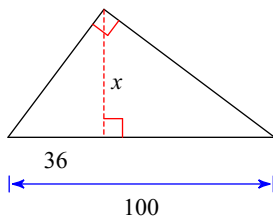
26)



- A) 16 B) 15
 C) 14 D) 8

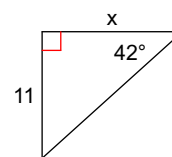
Find the missing side or angle. Round to the nearest tenth.

27)



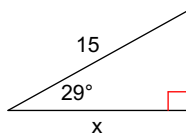
- A) 64 B) 80
 C) 100 D) 48

28)



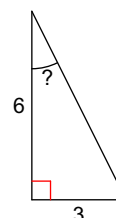
- A) 12.0 B) 12.2
 C) 9.9 D) 10.8

29)



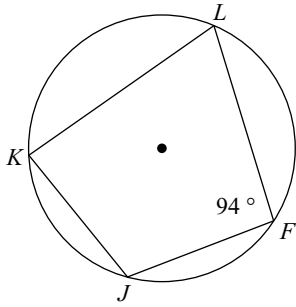
- A) 13.1 B) 13.5
 C) 12.4 D) 17.2

30)



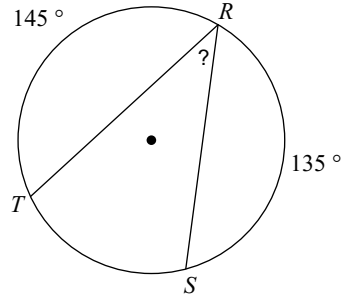
Find the measure of the arc or angle indicated.

31) Find $m\widehat{JKL}$



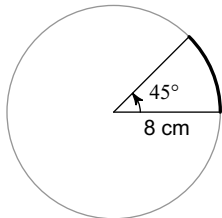
- A) 200° B) 268°
 C) 126° D) 188°

32)



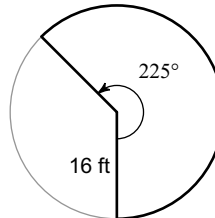
Find the length of each arc. Round your answers to the nearest tenth.

33)



- A) 23.8 cm B) 25.1 cm
 C) 61.3 cm D) 6.3 cm

34)



- A) 381.7 ft^2 B) 804.2 ft^2
 C) 100.5 ft^2 D) 502.7 ft^2

Use the information provided to write the equation of each circle.

35) Center: $(2, 11)$

Radius: 6

- A) $(x - 2)^2 + (y - 11)^2 = 36$
 B) $(x + 10)^2 + y^2 = 36$
 C) $(x + 2)^2 + (y - 11)^2 = 1296$
 D) $(x + 9)^2 + (y - 1)^2 = 36$

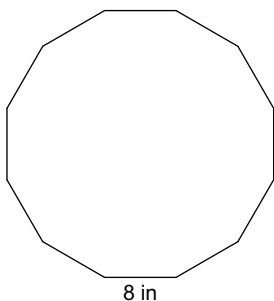
Use the information provided to write the standard form equation of each circle.

36) $x^2 + y^2 - 16x + 24y + 199 = 0$

- A) $(x + 8)^2 + (y + 12)^2 = 9$
 B) $(x - 8)^2 + (y + 12)^2 = 81$
 C) $(x - 8)^2 + (y + 12)^2 = 9$
 D) $(x + 8)^2 + (y - 10)^2 = 9$

Find the area of each figure. Round your answer to the nearest tenth.

37)



- A) 1433.1 in^2 B) 741.8 in^2
 C) 716.6 in^2 D) 198.8 in^2

Answers to Final Practice Test

1) A
5) A
9) D
13) D
17) C
21) C
25) D
29) A
33) D
37) C

2) B
6) D
10) A
14) D
18) A
22) B
26) B
30) 27°
34) D

3) B
7) B
11) B
15) A
19) D
23) C
27) D
31) D
35) A

4) A
8) D
12) D
16) B
20) A
24) D
28) B
32) 40°
36) C