

Algebra 2 Year 2
7.1-7.5 Partner Test
CALCULATOR

Names _____
Date _____ Hour _____

Solve each equation for x. Round your answer to the nearest hundredth. **SHOW ALL WORK**

1. $7^x = 28$

1. _____

2. $4^{2x} = 24$

2. _____

3. $3^{2x-4} = 10$

3. _____

4. $4(2^x) = 12$

4. _____

5. $3(2^x) - 6 = 15$

5. _____

6. $e^x = 15$

6. _____

Solve for x . **SHOW ALL WORK.** Check for extraneous answers.

7. $\log_4 x = 3$

7. _____

8. $\log_7(x+3) = 0$

8. _____

9. $\log_4(4x-1) = \log_4(2x+9)$

9. _____

10. $2\log_2(x+3) = 8$

10. _____

11. $-3 + \log_2(2x-4) = 0$

11. _____

12. $\log_2(x-1) - \log_2 3 = 5$

12. _____

13. $\log_6(x+5) + \log_6(x) = 1$

13. _____

Algebra 2 Year 2
7.1-7.5 Partner Test
CALCULATOR

48

Names Key
Date _____ Hour _____

Solve each equation for x. Round your answer to the nearest hundredth. **SHOW ALL WORK**

1. $7^x = 28$

$$\log_7 28 = x$$

1. 1.71 +3

2. $4^{2x} = 24$

$$\log_4 24 = 2x$$
$$2.29 = 2x$$

2. 1.15 +3

3. $3^{2x-4} = 10$

$$\log_3 10 = 2x - 4$$
$$2.09 = 2x - 4$$

3. 3.05 +3

4. $4(2^x) = 12$

$$2^x = 3$$
$$\log_2 3 = x$$

4. 1.58 4

5. $3(2^x) - 6 = 15$

$$\frac{3(2^x)}{3} = \frac{21}{3}$$
$$2^x = 7$$

$$\log_2 7 = x$$

5. 2.81 4

6. $e^x = 15$

$$\ln 15$$

6. 2.71 3

20 + rounding
21

Solve for x. SHOW ALL WORK. Check for extraneous answers.

7. $\log_4 x = 3$

$$4^3 = x$$

7. $x = 64$ ³

8. $\log_7(x+3) = 0$

$$7^0 = x+3$$
$$1 = x+3$$

8. $x = -2$ ³

9. $\log_4(4x-1) = \log_4(2x+9)$

$$4x-1 = 2x+9$$
$$2x = 10$$
$$x = 5$$

9. $x = 5$ ³

10. $2\log_2(x+3) = 8$

$$\log_2(x+3) = 4$$
$$2^4 = x+3$$
$$16 = x+3$$

10. $x = 13$ ⁴

11. $-3 + \log_2(2x-4) = 0$

$$\log_2(2x-4) = 3$$
$$2^3 = 2x-4$$
$$8 = 2x-4$$

11. $x = 6$ ⁴

12. $\log_2(x-1) - \log_2 3 = 5$

$$\log_2 \frac{x-1}{3} = 5$$
$$2^5 = \frac{x-1}{3}$$

12. $x = 97$ ⁵

13. $\log_6(x+5) + \log_6(x) = 1$

$$\log_6(x+5)(x) = 1$$
$$6^1 = (x+5)(x)$$
$$0 = x^2 + 5x - 6$$
$$(x+6)(x-1)$$

13. $x = 1$ ⁵

$$x = -6$$
$$x = 1$$

$$\frac{18}{9} = \frac{27}{27}$$