

Math 152 Ohlone College

Ch.8 Test

1. Solve $\frac{a+1}{3} - \frac{a-1}{6} = \frac{1}{2}$

2. Solve for x, $z = \frac{x-\mu}{\sigma}$

3. Solve, give the result in interval notation, and graph the solution set
 $-4(y-5) \leq y+8$

4. Solve $|7x+12| = |x-6|$

In problem 5 and 6, solve, write the solution set in interval notation and graph it.

5. $|4-3x| \leq 12$

6. $|2-5x| \geq 10$

In problems 7, 8, and 9, 10, and 11 factor each polynomial completely.

7. $-3x^2 + 6xy$

8. $c^2 - 7c + 12$

9. $3x^2 - 10xy - 8y^2$

10. $x^3 + 216$

11. $16x^4 - 128xy^3$

12. Simplify

$$\frac{a+6}{a^2-16} \cdot \frac{3a-12}{3a+18}$$

13. Subtract and simplify

$$\frac{2}{a+4} - \frac{6}{a+3}$$

14. Simplify a complex fraction

$$\frac{\frac{1}{a} + \frac{1}{b}}{\frac{1}{a}}$$

15. Find the slope of the line that passes through the points (-1, -8) and (-3, 5).

16. Use point-slope form to write the equation of the line with $m = 3$ and passing through the point (-2, 5). Write the equation in general form.

17. Find the slope of a line perpendicular to the line $3x = 4y - 2$.

18. An object in free fall travels a distance s that is directly proportional to the square of the time. If an object falls 1,024 feet in 8 seconds, how far will it fall in 10 seconds?

19. The area of a rectangle varies jointly with its length and width. If both the length and the width are tripled, by what factor is the area multiplied?

20. Express as a formula: “A varies directly with the square of p ”