

Algebra 2CP
Chapter 8 YOU CAN...

❖ **Simplify rational expressions**

1. $-\frac{48t^5uv}{32tv^4}$

2. $\frac{12y+2}{18y+3}$

3. $\frac{3x^2-2x-8}{3x^2-12}$

❖ **Multiply rational expressions**

4. $\frac{-4ab}{21c} \cdot \frac{14c^2}{22a^2}$

5. $\frac{16x^2-9}{5x+1} \cdot \frac{25x^2-1}{4x+3}$

6. $\frac{x^2+3x-10}{x^2+8x+15} \cdot \frac{x^2+5x+6}{x^2+4x+4}$

❖ **Divide rational expressions**

7. $\frac{a^2-b^2}{6b} \div \frac{a+b}{36b^2}$

8. $\frac{\frac{x^2+7x+10}{x+2}}{\frac{x^2+2x-15}{x+2}}$

9. $\frac{x^2-11x+24}{x^2-18x+80} \div \frac{x^2-9x+20}{x^2-15x+50}$

❖ **Add rational expressions**

10. $\frac{x+2}{x-5} + 6$

11. $\frac{2p}{p^2-2p+1} + \frac{8}{p-1}$

12. $\frac{x-1}{x^2-1} + \frac{2}{5x+5}$

❖ **Subtract rational expressions**

13. $\frac{3}{4b} - \frac{2}{5b} - \frac{1}{2b}$

14. $\frac{7}{y-2} - \frac{11}{2-y}$

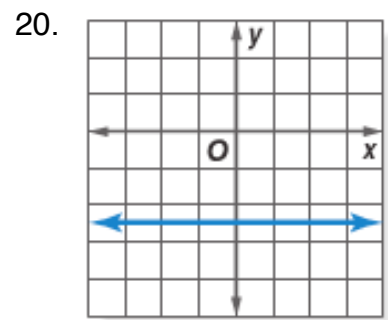
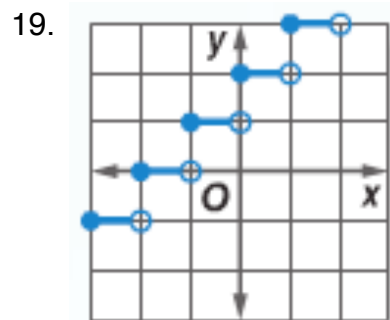
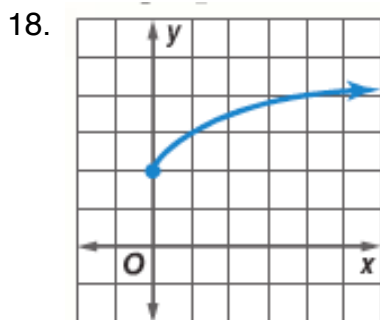
15. $\frac{k+3}{k^2+6k+9} - \frac{7}{2k+6}$

❖ **Simplify complex fractions**

16. $\frac{x - \frac{x}{2}}{x + \frac{x}{8}}$

17. $\frac{\frac{1}{b+2} + \frac{1}{b-5}}{\frac{2b^2-b-3}{b^2-3b-10}}$

❖ **Identify the type of function represented by each graph**



❖ **Graph each function**

21. $y = \frac{3}{4}x$

22. $y = |2x| + 3$

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

Algebra 2CP
Chapter 8 YOU CAN...

❖ **Solve each equation**

24. $\frac{y}{y+1} = \frac{2}{3}$

25. $\frac{9}{t-3} = \frac{t-4}{t-3} + \frac{1}{4}$

26. $\frac{2}{y+2} - \frac{y}{2-y} = \frac{y^2+4}{y^2-4}$

❖ **Solve distance-rate-time word problems**

27. A 555-mile, 5-hour plane trip was flown at two speeds. For the first part of the trip, the average speed was 105 mph. Then the tailwind picked up, and the remainder of the trip was flown at an average speed of 115 mph. For how long did the plane fly at each speed?
28. Wendy took a trip from Davenport to Omaha, a distance of 300 miles. She traveled part of the way by bus, which arrived at the train station just in time for Wendy to complete her journey by train. The bus averaged 40 mph and train 60 mph. The entire trip took 5 1/2 hours. How long did Wendy spend on the train?

❖ **Solve sharing the job word problems**

29. A worker can power wash a wall of a certain size in 5 hours. Another worker can do the same job in 4 hours. If the workers work together, how long would it take to do the job?
30. Stan and Hilda can mow the lawn in 40 minutes if they work together. If Hilda does the work in half the time Stan does, how long does it take Stan to mow the lawn alone?