



ACT COMPASS Preparation Worksheet

Algebra: Rational Expressions

Simplify each expression.

1. $-\frac{36x^3}{42x^2}$

2. $-\frac{70n^2}{28n}$

3. $\frac{x-4}{3x^2-12x}$

4. $\frac{27}{27x+18}$

5. $\frac{b^2+3b-28}{b^2-49}$

6. $\frac{6v^3+42v^2}{2v^2+26v+84}$

7. $\frac{x^2+2x-80}{2x^3-24x^2+64x}$

8. $\frac{59n}{99} \cdot \frac{80}{33n}$

9. $\frac{96}{38n} \cdot \frac{25}{45}$

10. $\frac{2(p+6)}{4} \cdot \frac{p-3}{2(p-3)}$

11. $\frac{1}{v+10} \cdot \frac{10v+30}{v+3}$

12. $\frac{3b^2+18b}{b+6} \cdot \frac{1}{b+8}$

13. $\frac{v-7}{v+6} \cdot \frac{10v+60}{v-7}$

14. $\frac{8v-56}{8v+48} \cdot \frac{v^2+9v+18}{8v^2+24v}$

15. $\frac{10n}{9} \div \frac{13n^2}{16}$

16. $\frac{7}{18} \div \frac{6}{9a}$

17. $\frac{7a^2}{7a^3+56a^2} \div \frac{2}{a^2+7a-8}$

18. $\frac{7}{8r-40} \div \frac{1}{8r-40}$

19. $\frac{b^2-2b-15}{8b+20} \div \frac{2}{4b+10}$

20. $\frac{6p+27}{18p^2+36p} \div \frac{16p+72}{2p+4}$

21. $\frac{u+5v}{8v^2u^2} - \frac{u-6v}{8v^2u^2}$

22. $\frac{4a-5}{6a^2+30a} + \frac{a-1}{6a^2+30a}$

23. $\frac{7x}{2x} - \frac{x-2}{20x+16}$

24. $\frac{7}{3n^2+24n} - \frac{7}{2n}$

25. $\frac{4x}{x^2+4x-5} - \frac{5}{4}$

26. $\frac{6}{x-2} + \frac{6}{x+1}$