Simplify each expression by factoring.

$$1.\frac{4x^{3}}{2x^{2}+3x}$$

$$2. \frac{x^{3}+x^{2}-2x}{x^{4}+4x^{3}-5x^{2}}$$

$$3. \frac{2x^{2}-5x-3}{2x^{2}-7x-4}$$

$$4. \frac{5x^{2}+37x+14}{5x^{3}-33x^{2}-14x}$$

$$5. \frac{8x^{2}-60x-32}{-4x^{2}+26x+48}$$

$$6. \frac{6x^{3}-24x^{2}+30x-120}{9x^{4}+36x^{2}-45}$$

$$7. \frac{6x^{2}+5x-4}{6x^{2}-x-1}$$

$$8. \frac{x^{4}+8x}{x^{4}- 2x^{3}+ 4x^{2}}$$

$$9. \frac{6x^{4}- 3x^{3}- 63x^{2}}{12x^{2}-84x}$$

$$10. \frac{x^{5}-3x^{3}-4x}{x^{4}+2x^{3}+x^{2}+2x}$$

$$11. \frac{-3x^{2}+25x-8}{x^{3}- 8x^{2}+x-8}$$

$$12. \frac{-x^{3}+ 3x^{2}+13x-15}{-2x^{3}+7x^{2}+20x-25}$$