

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

11  $\frac{4}{x-2} - \frac{x}{x+3}$

12  $\frac{5}{x+1} - \frac{x+1}{3}$

13  $\frac{3x}{3x-1} + \frac{2x}{x+2}$

14  $\frac{x}{2} + \frac{x-1}{x} + \frac{4}{x-2}$

15  $\frac{5}{x} + \frac{2}{x-1} + \frac{3}{x+3}$

16  $\frac{2}{x-1} - \frac{3}{x+2} + \frac{5}{x-3}$

17  $\frac{x}{x+2} + \frac{x}{x-1} + \frac{2x-1}{x}$

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

19  $\frac{x}{x+4} - \frac{3}{x^2-16}$

20  $\frac{5x}{x^2+5x+6} - \frac{2}{x+3} + \frac{4}{x+2}$

**EXERCISE 14.04**

(page 227)

1  $\frac{3y}{2}$

2  $\frac{7c}{10d}$

3  $\frac{12x^4}{y}$

4  $a^2b^2c^2$

5  $\frac{b}{2}$

6  $\frac{b^{10}}{a^2c^8}$

7  $9x^8y^{10}$

8  $72x^{27}$

9  $\frac{1}{y^{10}}$

10  $\frac{9}{5x^6}$

11  $\frac{x^6}{y^2}$

12  $4x^2$

13  $\frac{3}{4y^9}$

14  $\frac{4x^4y^6}{9}$

15 1

16  $2^6 = 6^4$

**PUZZLE****The shoemaker's will**  
(page 227)The executor shared  
the shoes in the ratio

1  $\frac{1}{2} : \frac{1}{3} : \frac{1}{9} = 9 : 6 : 2$

which is probably what the  
shoemaker intended. The  
problem with the will is that  
the three given fractions  
do not add to 1. In fact,  
 $\frac{1}{2} + \frac{1}{3} + \frac{1}{9} = \frac{17}{18}$  so, if  
there were a large number  
of shoes,  $\frac{1}{18}$  would be  
unallocated.**EXERCISE 14.05**

(page 229)

1  $\frac{6}{p}$

2  $\frac{4}{q}$

3  $\frac{5c}{7}$

4  $c$

5  $x$

6  $\frac{4x+8}{5}$

7  $\frac{5x}{6}$

8  $\frac{x}{14}$

9  $\frac{2x+15}{5}$

10  $\frac{4x^2+50}{5}$

11  $\frac{3x}{2}$

12  $\frac{2x}{3}$

13  $\frac{-3x}{5}$

14  $\frac{6x^2-5x}{10}$

15  $\frac{5x}{2}$

16  $\frac{x^2+6x+20}{10}$

17  $\frac{6x+49}{21}$

18  $\frac{x+y}{xy}$

19  $\frac{2y-x}{xy}$

20  $\frac{2y+3x}{xy}$

21  $\frac{2-4x}{xy}$

22  $\frac{ay+bx}{x^2y}$

23  $\frac{15+2xy}{5xy}$

24  $\frac{y-3x^2}{xy}$

25  $\frac{9+4y}{6x}$

26  $\frac{bx^2+ay^2-a^2x}{abxy}$

27  $\frac{40-33x}{30xy}$

28  $\frac{2xy+3x+4y}{x^2y^2}$

29  $\frac{x^2z+xy^2+yz^2}{xyz}$

30  $\frac{3x-2y^2}{6y}$

31  $\frac{5x^2+6a}{15ax}$

32  $\frac{20ayz-24az+75a}{30xyz}$

33  $\frac{7x+3}{12}$

34  $\frac{2x-6}{15}$

35  $\frac{5x+1}{6}$

36  $\frac{5x-3}{6}$

37  $\frac{7x-63}{30}$

38  $\frac{3x^2+4y^2}{18xy}$

39  $\frac{x^2+6x+1}{x^2}$

40  $\frac{3x-5x^2-12}{2x^2}$

**EXERCISE 14.06**

(page 229)

1  $\frac{2x+5}{x^2+5x+6}$

2  $\frac{5x+13}{x^2+4x-5}$

3  $\frac{12x+7}{6x^2+7x-3}$

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

5  $\frac{x+2}{x^2-x}$

6  $\frac{4x^2+5x+10}{x^2+2x}$

7  $\frac{2x^2+5x}{x^2+5x+4}$

8  $\frac{ax+bx}{x^2+2ax-2bx-4ab}$

9  $\frac{6x+15}{2x^2+9x+9}$

10  $\frac{x^2+2x+12}{x^2+x-20}$

11  $\frac{12+6x-x^2}{x^2+x-6}$

12  $\frac{14-2x-x^2}{3x+3}$

13  $\frac{9x^2+4x}{3x^2+5x-2}$

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

15  $\frac{10x^2+13x-15}{x^3+2x^2-3x}$

16  $\frac{4x^2+15x-31}{x^3-2x^2-5x+6}$

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

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

19  $\frac{x^2-4x-3}{x^2-16}$

20  $\frac{7x+8}{x^2+5x+6}$