

TEST YOUR SKILLS

- 1** Simplify the complex fraction:

$$\frac{\frac{1}{x+a} + \frac{1}{x-a}}{\frac{1}{x+a} - \frac{1}{x-a}}.$$

(USA Temple College, Texas, Practice Test, 2005)

$$\left[-\frac{x}{a} \right]$$

- 2** Subtract and write the answer in lowest terms:

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

(CAN John Abbott College, Final Exam, 2000)

$$\left[\frac{3}{x^3+2x^2-x-2} \right]$$

- 3** Factor each of the following polynomials. If the polynomial is prime, say so.

a) $2a^2 - 16a + 32$;

b) $9y^2 + 4$.

(USA Tacoma Community College, Review for Test, 2002)

[a) $2(a-4)^2$; b) prime]

- 4** Simplify by factoring and cancelling common

factors: $\frac{2x^2-5x-12}{x^2+x-20} : \frac{4x^2-9}{x^2+4x-5}.$

(CAN John Abbott College, Final Exam, 2000)

$$\left[\frac{x-1}{2x-3} \right]$$

- 5** Factor as much as possible:

a) $22x^3 - 19x^2 + 13$;

b) $3x^3 - 3x$;

c) $7x^2 + 8x + 1$;

d) $xy - 4x + 5y - 20$.

(CAN John Abbott College, Final Exam, 1999)

[a) prime; b) $3x(x+1)(x-1)$;

c) $7(x+1)(x-1)$; d) $(y-4)(y+5)$]

GLOSSARY

to cancel: cancellare

to factor: fattorizzare, scomporre

lowest terms: minimi termini

prime: primo

to simplify: semplificare

to subtract: sottrarre