

Exam IIB Review Sheet

You must have 100% of the exam completed in order to be eligible to take the in-class exam. Part of this exam will be on ALEKS and the other part will be paper/pencil.

Show all your work to get full credit. No calculators are allowed on this exam.

1. Find the greatest common factor of 24 and 42.	2. Find the least common multiple of 6 and 8.
3. Subtract and write your answer as a mixed number in the simplest form. $9\frac{1}{4} - 4\frac{5}{6}$	4. Multiply and write your answer as a mixed number in the simplest form. $2\frac{7}{9} \times 5\frac{1}{5}$
5. Add and write your answer in the simplest form. $-2\frac{1}{4} + 3\frac{1}{8}$	6. Find the greatest common factor of $16y^4u^6v^2$, and $24u^8v^7$.

7. Factor the following.

A. $18vw^7y^2 - 24v^4w^9$	<u>For my Eyes Only</u>	B. $w^2 + 14w + 49$	<u>For my Eyes Only</u>
C. $3y^2 - 4y - 20$	<u>For my Eyes Only</u>	D. $9x^5 + 24x^4 + 12x^3$	<u>For my Eyes Only</u>
E. $4 - 25w^2$	<u>For my Eyes Only</u>	F. $125 - 8v^3$	<u>For my Eyes Only</u>
G. $5y^3 - 2y^2 - 35y + 14$ (Hint: Factor by grouping)	<u>For my Eyes Only</u>	H. $27y^6 - x^9$	<u>For my Eyes Only</u>

8. Perform the operation indicated and simplify the following completely.

A. $\frac{4u^2 - 100}{u^2 - 8u + 15}$

For my Eyes Only

B. $\frac{3v^3x^3}{3u^3x^5 - 15x^2}$

C. $\frac{2y}{3a} \cdot \frac{9ay}{10y^5}$

D. $\frac{x-1}{x^2-x-6} \cdot \frac{4x+8}{x-2}$

E. $\frac{c^2w^3}{12d^3k^6} + \frac{4y^3}{9ck}$

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

(Assume all variables represent positive numbers for all the problems below)

$$G. \sqrt{\frac{y^{10}z^9}{2}} \cdot \frac{\sqrt{8x^7}}{\sqrt{x^5y^6z^9}}$$

$$H. \sqrt{4y^{14}}$$

$$I. (3\sqrt{x} - 5\sqrt{2})(3\sqrt{x} + 5\sqrt{2})$$

$$J. (\sqrt{x} + 2\sqrt{3})^2$$

$$K. 4x\sqrt{27u^3} - u\sqrt{75ux^2}$$

$$L. 2\sqrt{32} \times \sqrt{24}$$

M. Rationalize the denominator and simplify.

$$\frac{\sqrt{11} - \sqrt{5}}{\sqrt{11} + \sqrt{5}}$$

N. $\sqrt{-72}$

O. $2vx^{-2}8v^{-1}4u^7u^{-1}x^{-4}$