

Review Sheet for Unit#3a Test Factoring

Name _____

****SHOW YOUR WORK****

FACTOR THE EXPRESSION

1. $x^2 - 3x - 40$

2. $x^2 + 7x + 10$

3. $x^2 + 16$

4. $5x^2 + 12x - 9$

5. $2x^2 + 6x - 8$

6. $4x^2 - 49$

7. $x^2 - 10x + 25$

8. $x^3 + 3x^2 - 9x - 27$

9. $4y^3 - 8y^2$

10. $2x^3 - 4x^2 - 48x$

11. $2k^2 - 6k$

12. $4a^2 - 18a + 14$

ew Sheet for Unit#3a Test Factoring
****SHOW YOUR WORK******

* GCF
 Tri a=1 X
 Tri a>1 sign slide
 Binomial DOTS (+)(-)
 4 terms Name _____

FACTOR THE EXPRESSION

Tri a=1
 1. $x^2 - 3x - 40$

$\begin{array}{r} -40 \\ -8 \quad 5 \\ -3 \end{array}$ $(x-8)(x+5)$

Tri a=1
 2. $x^2 + 7x + 10$

$\begin{array}{r} 10 \\ 5 \quad 2 \\ 7 \end{array}$ $(x+5)(x+2)$

Binomial

3. $x^2 + 16$

sum

Prime = Not the difference of 2 perfect sqs.

Tri a>1
 4. $5x^2 + 12x - 9$

$\begin{array}{r} 45 \\ 15 \quad -3 \\ 12 \end{array}$
 $(x+\frac{15}{5})(x-\frac{3}{5})$
 $(x+3)(5x-3)$

Tri a>1
 5. $2x^2 + 6x - 8$

or factor GCF
 $\begin{array}{r} -16 \\ 8 \quad -2 \\ 6 \end{array}$
 $(x+\frac{8}{2})(x-\frac{2}{2})$
 $(x+4)(x-1)$

6. $\sqrt{4x^2 - 49}$ 2 terms - DOTS

$(2x+7)(2x-7)$

Tri a=1
 7. $x^2 - 10x + 25$

$\begin{array}{r} 25 \\ -5 \quad -5 \\ -10 \end{array}$
 $(x-5)(x-5)$
 $(x-5)^2$

8. $(x^3 + 3x^2)(9x - 27)$ 4 terms grouping

$x^2(x+3) - 9(x+3)$
 $(x+3)(x^2-9)$ DOTS
 $(x+3)(x+3)(x-3)$

9. $4y^3 - 8y^2$ GCF

$4y^2(y-2)$

① GCF
 ② Tri a=1

10. $\frac{2x^3}{2x} - \frac{4x^2}{2x} - \frac{48x}{2x}$

$2x(x^2 - 2x - 24)$
 $\begin{array}{r} -24 \\ -6 \quad +4 \\ -2 \end{array}$
 $2x(x-6)(x+4)$

11. $2k^2 - 6k$ GCF

$2k(k-3)$

12. $\frac{4a^2}{2} - \frac{18a}{2} + \frac{14}{2}$ GCF Tri a>1

$2(2a^2 - 9a + 7)$
 $\begin{array}{r} 14 \\ -7 \quad -2 \\ -9 \end{array}$
 $2(a-\frac{7}{2})(a-\frac{2}{2})$
 $2(2a-7)(a-1)$