

Name \_\_\_\_\_

Simplify completely. Leave answers as fractions, not complex numbers.

1)  $\frac{5}{4} - \frac{3}{4}$

2)  $\frac{3}{2} - \frac{1}{2}$

3)  $\frac{2}{5} + \frac{4}{5}$

4)  $\frac{1}{3} - \frac{1}{3}$

5)  $6 - \frac{1}{6}$

6)  $\frac{1}{2} - \frac{1}{2}$

7)  $\frac{1}{5} + \frac{1}{5}$

8)  $\frac{7}{6} - \frac{5}{6}$

9)  $\left(-\frac{4}{5}\right) - \frac{7}{8}$

10)  $\frac{1}{3} - \left(-\frac{5}{3}\right)$

11)  $\left(-\frac{1}{3}\right) + \frac{3}{8}$

12)  $\left(-\frac{10}{7}\right) + \frac{1}{6}$

13)  $\frac{9}{5} + \left(-\frac{4}{3}\right)$

14)  $2 - \frac{13}{8}$

$$15) \frac{9}{5} - \frac{5}{8}$$

$$16) \left(-\frac{4}{3}\right) - \left(-\frac{3}{2}\right)$$

$$17) (-1) + \left(-2\frac{2}{5}\right)$$

$$18) \left(-3\frac{3}{5}\right) - 4\frac{2}{5}$$

$$19) 3\frac{6}{7} + \left(-1\frac{1}{7}\right)$$

$$20) 1\frac{2}{7} + \left(-3\frac{4}{7}\right)$$

$$21) 2\frac{1}{3} + \left(-1\frac{2}{3}\right)$$

$$22) \left(-1\frac{3}{4}\right) + \left(-3\frac{3}{4}\right)$$

$$23) \left(-1\frac{7}{8}\right) + \left(-3\frac{1}{2}\right)$$

$$24) \left(-2\frac{7}{8}\right) + \left(-1\frac{1}{2}\right)$$

$$25) \left(-2\frac{5}{6}\right) - \left(-1\frac{1}{4}\right)$$

$$26) \left(-3\frac{5}{8}\right) - 4\frac{2}{5}$$

$$27) 1\frac{2}{5} - \left(-3\frac{3}{4}\right)$$

$$28) 2\frac{4}{5} - \frac{5}{8}$$

Name \_\_\_\_\_

Simplify completely.

Date \_\_\_\_\_ Period \_\_\_\_\_

\*\*\*NO CALCULATOR\*\*\*

1)  $\sqrt{125n}$

2)  $\sqrt{216v}$

3)  $\sqrt{512k^2}$

4)  $\sqrt{512m^3}$

5)  $\sqrt{216k^4}$

6)  $\sqrt{100v^3}$

7)  $\sqrt{80p^3}$

8)  $\sqrt{45p^2}$

9)  $\sqrt{147m^3n^3}$

10)  $\sqrt{200m^4n}$

11)  $\sqrt{75x^2y}$

12)  $\sqrt{64m^3n^3}$

13)  $\sqrt{16u^4v^3}$

14)  $\sqrt{28x^3y^3}$

Name \_\_\_\_\_

Factor completely.

Date \_\_\_\_\_ Period \_\_\_\_\_

\*\*\*NO CALCULATOR\*\*\*

1)  $b^2 + 8b + 7$

2)  $n^2 - 11n + 10$

3)  $m^2 + m - 90$

4)  $n^2 + 4n - 12$

5)  $n^2 - 10n + 9$

6)  $b^2 + 16b + 64$

7)  $m^2 + 2m - 24$

8)  $x^2 - 4x + 24$

9)  $k^2 - 13k + 40$

10)  $a^2 + 11a + 18$

11)  $n^2 - n - 56$

12)  $n^2 - 5n + 6$

Name \_\_\_\_\_

Factor completely.

Date \_\_\_\_\_ Period \_\_\_\_\_

\*\*\*NO CALCULATOR\*\*\*

1)  $3p^2 - 2p - 5$

2)  $2n^2 + 3n - 9$

3)  $3n^2 - 8n + 4$

4)  $5n^2 + 19n + 12$

5)  $2v^2 + 11v + 5$

6)  $2n^2 + 5n + 2$

7)  $7a^2 + 53a + 28$

8)  $9k^2 + 66k + 21$

**Simplify. Your answer should contain only positive exponents.**

Date \_\_\_\_\_ Period \_\_\_\_\_

\*\*\*NO CALCULATOR\*\*\*

1)  $(x^{-2}x^{-3})^4$

2)  $(x^4)^{-3} \cdot 2x^4$

3)  $(n^3)^3 \cdot 2n^{-1}$

4)  $(2v)^2 \cdot 2v^2$

5)  $\frac{2x^2y^4 \cdot 4x^2y^4 \cdot 3x}{3x^{-3}y^2}$

6)  $\frac{2y^3 \cdot 3xy^3}{3x^2y^4}$

7)  $\frac{x^3y^3 \cdot x^3}{4x^2}$

8)  $\frac{3x^2y^2}{2x^{-1} \cdot 4yx^2}$

9)  $\frac{x}{(2x^0)^2}$

10)  $\frac{2m^{-4}}{(2m^{-4})^3}$