

Factoring Homework 3(a)

Name KEY

Factor out the coefficient of the variable

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

$$\frac{1}{2}(a-1)$$

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

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

3) $\frac{3}{10}y - \frac{2}{5}$

$$\frac{3}{10}\left(y - \frac{20}{15}\right) = \frac{3}{10}\left(y - \frac{4}{3}\right)$$

4) $\frac{5}{6}s + \frac{2}{3}$

$$\frac{5}{6}\left(s + \frac{12}{15}\right) = \frac{5}{6}\left(s + \frac{4}{5}\right)$$

5) $1.1x + 9.9$

$$1.1(x+9)$$

6) $3.4c + 10.2$

$$3.4(c+3)$$

7) $2.2x - 4.4$

$$2.2(x-2)$$

8) $4h - 3$

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

9) Factor $-\frac{1}{2}$ out of $-\frac{1}{2}x + 6$.

$$-\frac{1}{2}(x-12)$$

10) Factor $-\frac{1}{4}$ out of $-\frac{1}{2}x - \frac{5}{4}y$.

$$-\frac{1}{4}(2x+5y)$$

Factoring Homework 3(b)

Name KEY

Numbers 1 – 3: Factor out the coefficient of the variable

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

$$\frac{1}{2}(a-1)$$

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

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

3) $3.4c + 10.2$

$$3.4(c+3)$$

4) Factor $-\frac{1}{4}$ out of $-\frac{1}{2}x - \frac{5}{4}y$.

$$-\frac{1}{4}(2x+5y)$$

Numbers 5– 10: Factor out the GCF

5) $12w^3r^2 - 9wr^2 + 15w^2r^3$

$$3wr^2(4w^2 - 3 + 5wr)$$

6) $-16p^3q^2 + 24p^2q^3 - 32p^4q$

$$-8p^2q(2pq - 3q^2 + 4p^2)$$

7) $9y^2z^2 - 81y^3z^2 - 90y^2z^4$

$$9y^2z^2(1 - 9y - 10z^2)$$

8) $36r^5 + 40r^4 - 160r^3 - 20r^2$

$$4r^2(9r^3 + 10r^2 - 40r - 5)$$

9) $8x - x^2$

$$x(8-x)$$

10) $9y^2 - 3y^3$

$$3y^2(3-y)$$