

## Factoring Review

1.  $v^2 + v - 20$

$\begin{array}{r} 1 \cdot 20 \quad -4 \cdot 5 \\ 2 \cdot 10 \\ - \\ 1 \end{array}$

2.  $n^2 + 1n - 72$

$(n-8)(n+9)$

Factors of -72

1. 72  
 2. 36  
 3. 24  
 4. 18  
 6. 12  
 -8. 9

$\begin{array}{r} -72 \\ -8 \quad 9 \\ 1 \end{array}$

$$(11.) \quad 5b^3 - 13b^2 + 8b$$

$$b(5b^2 - 13b + 8)$$

$$b(5b^2 - 8b) + (-5b + 8)$$

$$b(b(5b-8) + -1(5b-8))$$

$$b(b-1)(5b-8)$$

$$\begin{array}{l} 1 \cdot 40 \quad 4 \cdot 10 \\ 2 \cdot 20 \quad 5 \cdot 8 \end{array}$$

$$\begin{array}{r} 40 \\ -8b \quad -5b \\ -13 \end{array}$$

$$(12.) \quad 7n^2 + 52n + 60$$

$$(7n^2 + 42n) + (10n + 60)$$

$$7n(n+6) + 10(n+6)$$

$$(7n+10)(n+6)$$

$$\begin{array}{r} 420 \\ 42n \quad 10n \\ 52 \end{array}$$

$$7n(n+b) + 10(n+b)$$

$$7n + 10n = 10+7(n)$$
$$7(n+1) + 10(n+1) =$$

$$(13.) \quad 12b^3 + 42b^2$$
$$6b^2(2b+7)$$

$$(14.) \quad 3a^3 - 5a^2 - 28a$$

$$a(3a^2 - 5a - 28)$$

$$a(3a^2 - 12a + 7a - 28)$$

$$a(3a(a-4) + 7(a-4))$$

$$a(3a+7)(a-4)$$

$2 \cdot 4 = 8$   
 $3 \cdot 28 = 84$   
 $4 \cdot 21 = 84$   
 $6 \cdot 14 = 84$   
 $7 \cdot 12 = 84$

$-84$   
 $-12a$   
 $7a$   
 $-5$

$$(22.) \quad 2n^2 = 6 + 4n$$

$$2n^2 - 4n - 6 = 0$$

$$2(n^2 - 2n - 3) = 0$$

$$2(n-3)(n+1) = 0$$

$$n-3=0 \quad n+1=0$$

$$\boxed{n=3} \quad \boxed{n=-1}$$