10-3 Practice Problems

1) (x-5)(x+3)=0

$x-5=0$ $+5=+5$ $\quad x=5$ OR $x+3=0$ $-3\ -3$ $\quad x=-3$

2) (z - 13)(z - 14)

$z-13=0$ $+13\ +13$ $\quad z=13$ OR $z-14=0$ $+14\ +14$ $\quad$ OR $z=14$

3) $(d-7)(d+\frac{4}{3})=0$

$d-7=0$ $+7\ +7$ $\quad d=7$ OR $d+\frac{4}{3}=0$ $-\frac{4}{3}\ -\frac{4}{3}$ $\quad d=-\frac{4}{3}$

4) (3n + 11)(n+1)=0

$3n+11=0$ $-11\ -11$ $\quad \frac{3n}{3}=\frac{-11}{3}$ $\quad n=-\frac{11}{3}$ OR $n+1=0$ $-1\ -1$ $\quad n=-1$

5) (2y + 5)(7y - 5)=0

$2y+5=0$ $-5\ -5$ $\quad \frac{2y}{2}=\frac{-5}{2}$ $\quad y=-\frac{5}{2}$ OR $7y-5=0$ $+5\ +5$ $\quad \frac{7y}{7}=\frac{5}{7}$ $\quad y=\frac{5}{7}$

6) 2x + 2y

$2(x+y)$

7) $3s^4 + 16s$

$s(3s^3+16)$

8) $7w^5 - 35w^2$

$7w^2(w^3-5)$

9) $15n^3 + 25n$

$1 \cdot 5 \cdot 3$

$5n(3n^2+5)$

10) $v^3 - 5v^2 + 9v$

$v(v^2-5v+9)$

11) $6q^5 - 21q^4 - 15q^2$

$6 = 1 \cdot 2 \cdot 3$

$3q^2(2q^3-7q^2-5)$

Directions: Solve the equation.

12) $b^2 + 6b = 0$

$b(b+6)=0$

$b=0$ or $b+6=0$

$-6\ \ -6$

$b=-6$

13) $-10n^2 + 35n = 0$

$-1 \cdot 2 \cdot 5$

$-5n(2n-7)=0$

$\frac{-5n}{-5}=\frac{0}{-5}$ or $2n-7=0$

$+7\ \ +7$

$\frac{2n}{2}=\frac{7}{2}$

$n=0$ or $n=\frac{7}{2}$

14) $18c^2 + 6c = 0$

$6c(3c+1)=0$

$\frac{6c}{6}=\frac{0}{6}$ or $3c+1=0$

$-1\ \ -1$

$\frac{3c}{3}=\frac{-1}{3}$

$c=0$ or $c=-\frac{1}{3}$

15) $3k^2 = 6k$

$-6k\ \ -6k$

$3k^2-6k=0$

$3k(k-2)=0$

$\frac{3k}{3}=\frac{0}{3}$ $\quad k-2=0$

$+2\ \ +2$

$k=0$ or $k=2$

16) $4s^2 = 10s$

$-10s\ \ -10s$

$4s^2-10s=0$

$4 = 1 \cdot 2 \cdot 2$

$2s(2s-5)=0$

$\frac{2s}{2}=\frac{0}{2}$ $\quad 2s-5=0$

$+5\ \ +5$

$\frac{2s}{2}=\frac{5}{2}$

$s=0$ or $s=\frac{5}{2}$

17) $28m^2 = -8m$

$8 = 1 \cdot 2 \cdot 4$

$+8m\ \ +8m$

$28m^2+8m=0$

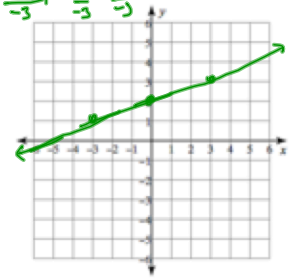
$4m(7m+2)=0$

$\frac{4m}{4}=\frac{0}{4}$ or $7m+2=0$

$-2\ \ -2$

$\frac{7m}{7}=\frac{-2}{7}$

$m=0$ or $m=-\frac{2}{7}$

SKILLZ REVIEW		
Graph.	List all pairs of numbers that multiply to the given number.	Which number pair contains the largest perfect square?
1) $x - 3y = -6$ $-x\ \ -x$ $\frac{-3y}{-3}=\frac{-x}{-3}\ \frac{-6}{-3}$ $y=\frac{1}{3}x+2$ 	2) 64 1, 64 2, 32 4, 16 8, 8	3) Use 64 1, 64 8, 8