Algebra 2

Topic 2 // x– int and y—int // ***Practice A***

N: Key
D:
P: 1 2 3 4 5 6

→ **Find the x-intercepts and y-intercepts**

x-int → $y=0$ y-int → $x=0$

1.) $y = -6x + 12$

$y=0$: $0 = -6x+12$; $-12 \quad -12$; $\frac{-12}{-6} = \frac{-6x}{-6}$ → $x = 2$ $(2,0)$

$x=0$: $y=-6(0)+12$; $y=12$ → $(0,12)$

x-intercepts: $(2,0)$
y-intercepts: $(0,12)$

2.) $y = 3x - 10$

$y=0$: $0=3x-10$; $+10 \quad +10$; $\frac{10}{3} = \frac{3x}{3}$; $x = 10/3$ $(10/3, 0)$

$x=0$: $y=3(0)-10$; $y=-10$ → $(0,-10)$

x-intercepts: $(10/3, 0)$
y-intercepts: $(0,-10)$

3.) $y = 1/4x + 4$

$y=0$: $0=\frac{1}{4}x+4$; $-4 \quad -4$; $(4)-4=\frac{1}{4}x\,(4)$; $16 = x$ → $(16,0)$

$x=0$: $y=\frac{1}{4}(0)+4$; $y=4$ $(0,4)$

x-intercepts: $(16,0)$
y-intercepts: $(0,4)$

4.) $6x + 4y = 12$

$y=0$: $6x+4(0)=12$; $\frac{6x}{6} = \frac{12}{6}$; $x=2$ → $(2,0)$

$x=0$: $6(0)+4y=12$; $\frac{4y}{4} = \frac{12}{4}$; $y=3$ → $(0,3)$

x-intercepts: $(2,0)$
y-intercepts: $(0,3)$

5.) $4x + 12y = 60$

$y=0$: $4x+12(0)=60$; $\frac{4x}{4} = \frac{60}{4}$; $x=15$ → $(15,0)$

$x=0$: $4(0)+12y=60$; $\frac{12y}{12} = \frac{60}{12}$; $y=5$ → $(0,5)$

x-intercepts: $(15,0)$
y-intercepts: $(0,5)$

6.) $4x + 5y = -80$

$y=0$: $4x+5(0)=-80$; $\frac{4x}{4} = \frac{-80}{4}$; $x=-20$ → $(-20,0)$

$x=0$: $4(0)+5y=-80$; $\frac{5y}{5} = \frac{-80}{5}$; $y=-16$ → $(0,-16)$

x-intercepts: $(-20,0)$
y-intercepts: $(0,-16)$