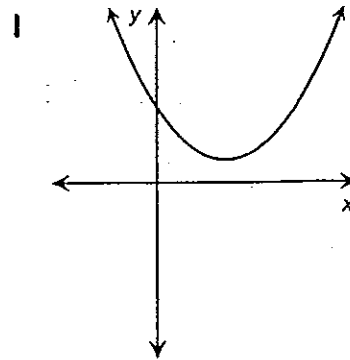
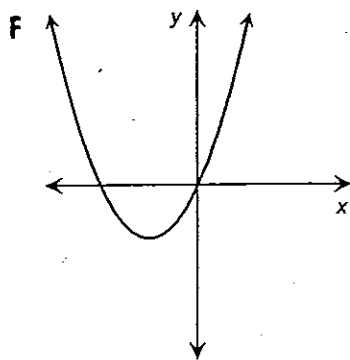
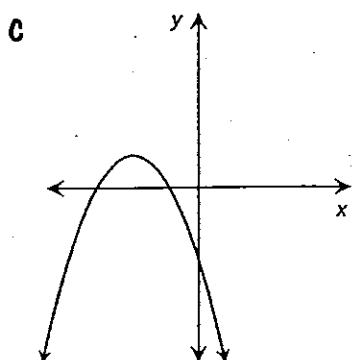
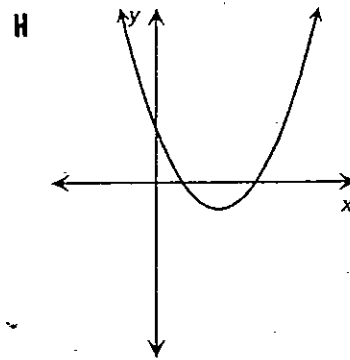
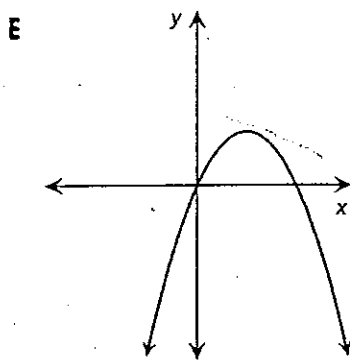
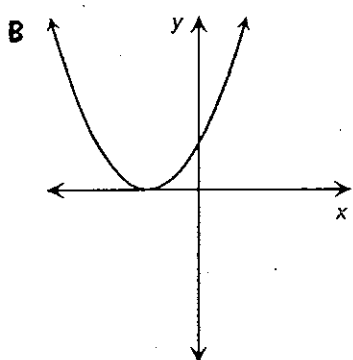
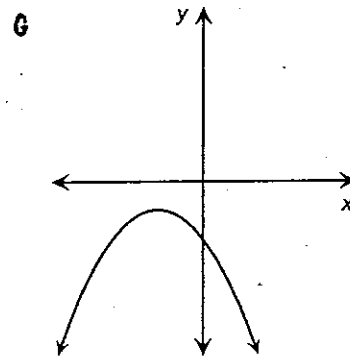
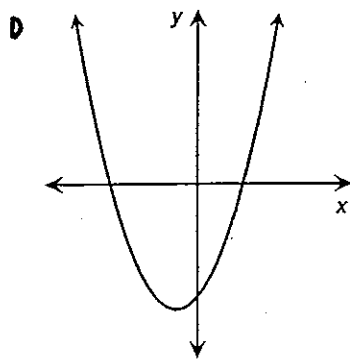
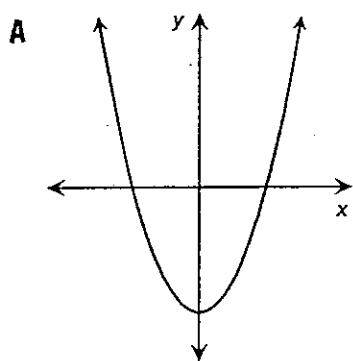


9.3

Features of a parabola

Complete the table below, then graph the parabolas neatly in your workbook.

Equation	x-intercepts ($y = 0$)	y-intercept ($x = 0$)	Axis of symmetry $x = \frac{-b}{2a}$	Vertex	Which graph below?
1 $y = 3x^2 - 12x + 9$	$x = 1$ or 3				
2 $y = -2x^2 - 8x - 6$		$y = -6$			
3 $y = x^2 - 4x + 5$	*		$x = 2$		
4 $y = 2x^2 + 2x - 12$				$(-\frac{1}{2}, -12\frac{1}{2})$	
5 $y = x^2 + 2x + 1$					B
6 $y = -x^2 + 3x$		$y = 0$			
7 $y = x^2 - 4$			$x = 0$		
8 $y = -x^2 - 2x - 2$	*			$(-1, -1)$	



9.3

Features of a parabola



Complete the table below, then graph the parabolas neatly in your workbook.

Equation	x-intercepts ($y=0$)	y-intercept ($x=0$)	Axis of symmetry $x = \frac{-b}{2a}$	Vertex	Which graph below?
1 $y = 3x^2 - 12x + 9$	$x=1$ or 3	$y=9$	$x=2$	$(2, -3)$	H ✓
2 $y = -2x^2 - 8x - 6$	$x=-3$ or -1	$y=-6$	$x=-2$	$(-2, 2)$	C ✓
3 $y = x^2 - 4x + 5$	None *	$y=5$	$x=2$	$(2, 1)$	I ✓
4 $y = 2x^2 + 2x - 12$	$x=-3$ or 2	$y=-12$	$x = -\frac{1}{2}$	$(-\frac{1}{2}, -12\frac{1}{2})$	D ✓
5 $y = x^2 + 2x + 1$	$x=-1$	$y=1$	$x=-1$	$(-1, 0)$ ✓	B
6 $y = -x^2 + 3x$	$x=0$ or 3	$y=0$	$x = \frac{3}{2}$	$(\frac{3}{2}, 2\frac{1}{4})$	E ✓
7 $y = x^2 - 4$	$x=2$ or -2	$y=-4$	$x=0$	$(0, -4)$	A ✓
8 $y = -x^2 - 2x - 2$	None *	$y=-2$	$x=-1$	$(-1, -1)$	G ✓

