

## Section 4.2 Exercises Part C

1. Three types of trees are in a local park. The number of alders was 4 more than twice as many birch, and there were 50 more pines than birch. There are a total of 874 trees in the park. How many of each kind are there?

2. If the length is 7 more than 4 times the width of a rectangle and the perimeter is 74mm, what are the dimensions?

3. Solve.  $5(x-7) = \frac{3}{2}x + 15$

4. Original Price: \$92.50  
Discount: 20%  
Final Price:

5. Original Price:  
Discount: 25%  
Final Price: \$174.30

6. What is the volume of a cylinder with a radius of 8cm and a height of 12cm?

Fill out the table for each of the following:

7.  $2x + 3y = 9$

x	y
5	
-4	
	3
	0
	7

8.  $y = -5x + 2$

x	y
2	
0	
-1	
	0
	4

9.  $x - 7y = 9$

x	y
1	
0	
-3	
	0
	5

10.  $y = \frac{3}{7}x$

x	y
	2
	5
2	
0	
	-1

Graph the following lines, and label three points.

11.  $4x + 2y = 10$

12.  $y = -2x - 7$

13.  $y = \frac{3}{2}x$

14.  $x = 5$

15.  $y = -\frac{3}{7}x - 2$

16.  $7x - 5y = 12$

17.  $y = -3$

18.  $5x + 2y = 6$

**Find the slope between each pair of points.**

**19.**  $(4,-2)$   $(7,3)$

**20.**  $(4,8)$   $(-5,6)$

**21.**  $(-3,-1)$   $(-3,-8)$

**22.**  $(7,7)$   $(-2,3)$

**23.**  $(-5,-3)$   $(4,-3)$

**24.**  $(-6,1)$   $(-5,5)$

**25.** Explain the difference one more time between a slope of zero and an undefined slope.

**Find two points of each line and then use those points to find the slope**

**26.**  $2x - 3y = 1$

**27.**  $y = \frac{3}{5}x + 4$

**28.**  $5x - y = 10$

**29.**  $2x + 7y = 1$

**30.**  $y = -\frac{2}{7}x + 3$

Answers:

1. 205 Birch, 414 Alder,  
255 Pine

2.  $w = 6, l = 31$

3.  $x = \frac{100}{7}$

4. \$74.00

5. \$232.40

6.  $2412.74 \text{ cm}^3$

7.

x	y
5	$-\frac{1}{3}$
-4	$\frac{17}{3}$
0	3
$\frac{9}{2}$	0
-6	7

8.

x	y
2	-8
0	2
-1	7
$\frac{2}{5}$	0
$-\frac{2}{5}$	4

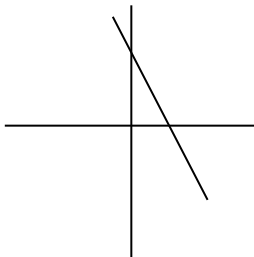
9.

x	y
1	$-\frac{8}{7}$
0	$-\frac{9}{7}$
-3	$-\frac{12}{7}$
9	0
44	5

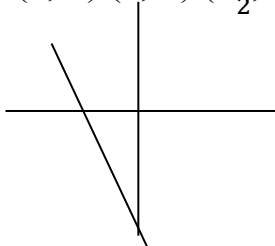
10.

x	y
$\frac{14}{3}$	2
$\frac{35}{3}$	5
2	$\frac{6}{7}$
0	0
$-\frac{7}{3}$	-1

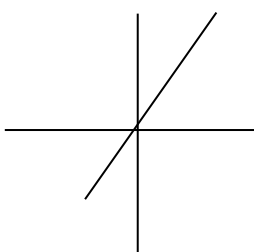
11.  $(0,5) (\frac{5}{2},0) (1,3)$



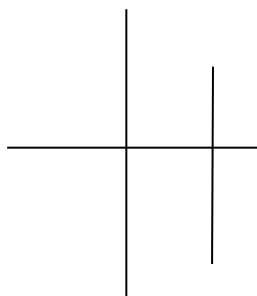
12.  $(0,-7) (1,-9) (-\frac{7}{2},0)$



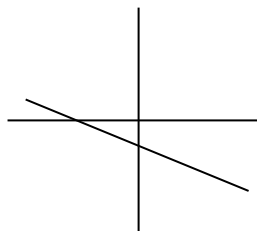
13.  $(0,0) (2,3) (4,6)$



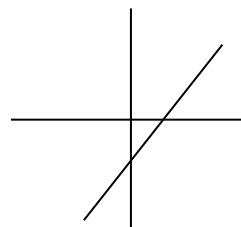
14.  $(5,2) (5,0) (5,-3.4)$



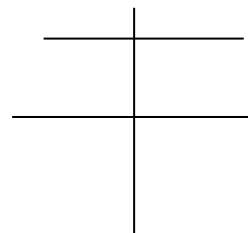
15.  $(0,-2) (7,-5) (-7,1)$



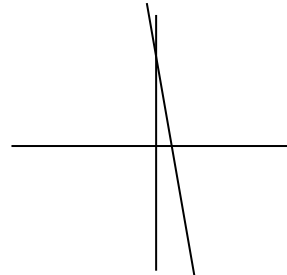
16.  $(\frac{12}{7},0) (0,-\frac{12}{5}) (1,-1)$



17.  $(5,-3) (7.2,-3) (0,-3)$



18.  $(0,3) (2,-2) (\frac{6}{5},0)$



19.  $m = \frac{5}{3}$

20.  $m = \frac{2}{9}$

21.  $m$  is undefined

22.  $m = \frac{4}{9}$

23.  $m = 0$

24.  $m = 4$

25. Undefined is straight up and down, vertical.  
0 is horizontal, straight across

26.  $(0,-\frac{1}{3}) (\frac{1}{2},0) m = \frac{2}{3}$

27.  $(0,4) (5,7) m = \frac{3}{5}$

28.  $(2,0) (0,-10) m = 5$

29.  $(0,\frac{1}{7}) (\frac{1}{2},0) m = -\frac{2}{7}$

30.  $(0,3) (7,1) m = -\frac{2}{7}$