- 1. The amount a spring will stretch, *S*, varies directly as the force (or weight) *F* attached to the spring. If a spring stretches 8.8 inches when 80 pounds are attached, write a direct variation equation for *S* in terms of *F* and find the amount the spring stretches when 70 pounds are attached?
- 2. The amount a spring will stretch, *S*, varies directly as the force (or weight) *F* attached to the spring. If a spring stretches 10.4 inches when 20 pounds are attached, write a direct variation equation for *S* in terms of *F* and find the amount the spring stretches when 80 pounds are attached?
- 3. The amount a spring will stretch, *S*, varies directly as the force (or weight) *F* attached to the spring. If a spring stretches 5.2 inches when 80 pounds are attached, write a direct variation equation for *S* in terms of *F* and find the amount the spring stretches when 40 pounds are attached?
- 4. The amount a spring will stretch, *S*, varies directly as the force (or weight) *F* attached to the spring. If a spring stretches 6 inches when 60 pounds are attached, write a direct variation equation for *S* in terms of *F* and find the amount the spring stretches when 30 pounds are attached?
- 5. The amount a spring will stretch, *S*, varies directly as the force (or weight) *F* attached to the spring. If a spring stretches 4.4 inches when 90 pounds are attached, write a direct variation equation for *S* in terms of *F* and find the amount the spring stretches when 50 pounds are attached?
- 6. The data below show direct variation. Find the constant of variation and write an equation of direct variation.

Time (hours)	2	5	8	11
Distance (miles)	60	150	240	330

7. The data below show direct variation. Find the constant of variation and write an equation of direct variation.

Time (hours)	3	6	12	15
Temperature (degrees C)	4.5	9	18	22.5

8. The data below show direct variation. Find the constant of variation and write an equation of direct variation.

Days	7	9	13	15
Growth (cm)	1.75	2.25	3.25	3.75

9. The data below show direct variation. Find the constant of variation and write an equation of direct variation.

Time (hours)	5	7	11	13
Temperature (degrees C)	6.25	8.75	13.75	16.25

10. The data below show direct variation. Find the constant of variation and write an equation of direct variation.

Days	3	6	12	15
Growth (cm)	2.25	4.5	9	11.25

11.	The number of gears G a machine can make varies directly as the time T of operation. If it
	can make 1200 gears in 5 hours, how many gears can it make in 10 hours?

[A] 600

[B] 2400

[C] 450

[D] 1800

12. The number of gears *G* a machine can make varies directly as the time *T* of operation. If it can make 888 gears in 3 hours, how many gears can it make in 8 hours?

[A] 2960

[B] 416

[C] 333

[D] 2368

13. The number of gears G a machine can make varies directly as the time T of operation. If it can make 5580 gears in 9 hours, how many gears can it make in 10 hours?

[A] 3767

[B] 5022

[C] 6200

[D] 4650

14. The number of gears *G* a machine can make varies directly as the time *T* of operation. If it can make 744 gears in 4 hours, how many gears can it make in 6 hours?

[A] 1395

[B] 372

[C] 1116

[D] 496

15. The number of gears *G* a machine can make varies directly as the time *T* of operation. If it can make 384 gears in 2 hours, how many gears can it make in 6 hours?

[A] 1152

[B] 864

[C] 160

[D] 128

16.	If $x = 30$ when $y = 50$ and x varies directly as y, then find x when $y = 1$				
	[A] 62	[B] 77	[C] 82	[D] 72	
17.	If $x = 120$ when $y =$	150 and x varies directl	y as y , then find x when	y = 180.	
	[A] 134	[B] 144	[C] 149	[D] 154	
18.	If $x = 14$ when $y = 7$	0 and x varies directly a	as y , then find x when y	y = 110.	
	[A] 17	[B] 22	[C] 32	[D] 12	
19.	If $x = 24$ when $y = 8$	0 and x varies directly	as y , then find x when y	y=90.	
	[A] 17	[B] 32	[C] 37	[D] 27	
20.	If $x = 133$ when $y =$	190 and x varies directl	y as y , then find x when	y = 40.	
	[A] 18	[B] 33	[C] 28	[D] 38	
21.	If $x = 136$ when $y =$	170 and x varies directl	y as y , then find x when	y = 140.	
	[A] 102	[B] 122	[C] 112	[D] 107	
22.	If $x = 36$ when $y = 1$	80 and x varies directly	as y , then find x when	y=190.	
	[A] 48	[B] 38	[C] 43	[D] 28	
23.	If $x = 81$ when $y = 9$	0 and x varies directly a	as y , then find x when y	y = 150.	
	[A] 125	[B] 130	[C] 135	[D] 145	
24.	If $x = 84$ when $y = 1$	40 and x varies directly	as y , then find x when	y=120.	
	[A] 77	[B] 82	[C] 62	[D] 72	
25.	If $x = 24$ when $y = 8$	0 and x varies directly	as y , then find x when y	y=160.	
	[A] 43	[B] 38	[C] 48	[D] 58	