

CHAPTERS 6 AND 12 ANSWERS

PROBLEM SET 6-7

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|-----|----------------|----|----|----|-----|----|----------------|
| 1. | 8 | 2. | 56 | 3. | 336 | 4. | 60,480 |
| 5. | 15 | 6. | 1 | 7. | 35 | 8. | $\frac{5}{18}$ |
| 9. | 4,368 | | | | | | |
| 10. | 21 | | | | | | |
| 11. | 12 | | | | | | |
| 12. | 4,151,347,200 | | | | | | |
| 13. | 2600 | | | | | | |
| 14. | 126 | | | | | | |
| 15. | 10,897,286,400 | | | | | | |
| 16. | 176 | | | | | | |

PROBLEM SET 6-8

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|-----|---|-----|--------------|
| 1. | $x^3 - 9x^2 + 27x - 27$ | | |
| 2. | $a^4 + 12a^3b + 54a^2b^2 + 108ab^3 + 81b^4$ | | |
| 3. | $x^5 + 10x^4 + 40x^3 + 80x^2 + 80x + 32$ | | |
| 4. | $x^6 - 6x^4y + 12x^2y^2 - 8y^3$ | | |
| 5. | $16x^4 + 96x^3y + 216x^2y^2 + 216xy^3 + 81y^4$ | | |
| 6. | $32x^5 + 80x^4y + 80x^3y^2 + 40x^2y^3 + 10xy^4 + y^5$ | | |
| 7. | $594x^{10}$ | 8. | $80x^2$ |
| 9. | $27x^8$ | 10. | $264x^{10}$ |
| 11. | $-823,680x^8y^7$ | 12. | $314,928x^7$ |

PROBLEM SET 12-1

1. {HH, HT, TH, TT}
2. {HHHH, HHHT, HHTH, HHTT, HTHH, HTHT, HTTH, HTTT, TTTT, TTTH, TTHH, TTHT, THTT, THTH, THHT, THHH}
3. 26
4. 13
5. 1
6. 16
7. 3
8. Not mutually exclusive
9. Mutually exclusive
10. Not mutually exclusive
11. Independent
12. Not independent
13. Not independent
14. Independent
- 15a. .3000 15b. .5000 15c. .8000 15d. .8000
- 16a. .2000 16b. .4000 16c. .6000 16d. .8000
- 17a. .3750 17b. .6250 17c. .6250
18. .00001847
19. .00000008149
- 20a. .7891 20b. .3537 20c. .2925 20d. .2109
- 21a. $q = 17, p = 18$ 21b. 14

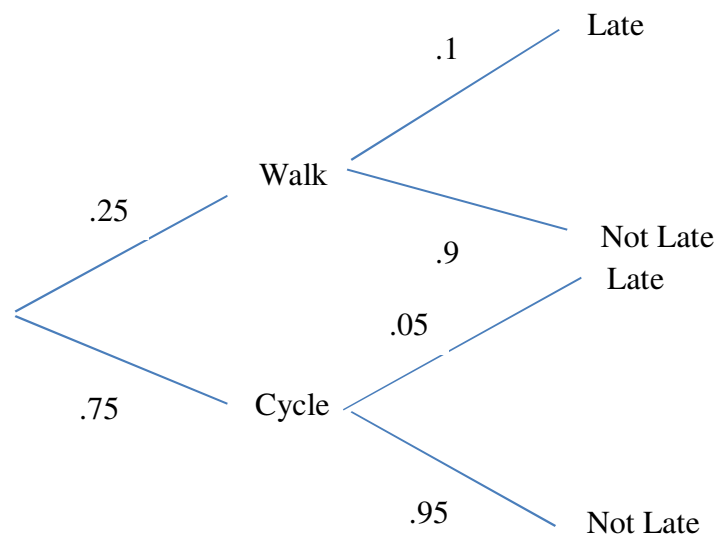
PROBLEM SET 12-1A

1. .3600
2. .2666
3. .2083
4. .0417
5. .2778
6. .5600
7. .0440
8. .0880
9. .6975
10. .5454
11. .5200
12. .7000
13. .5000
14. .5000
15. .8333
16. .8333
17. .6667
18. .8333

PROBLEM SET 12-2

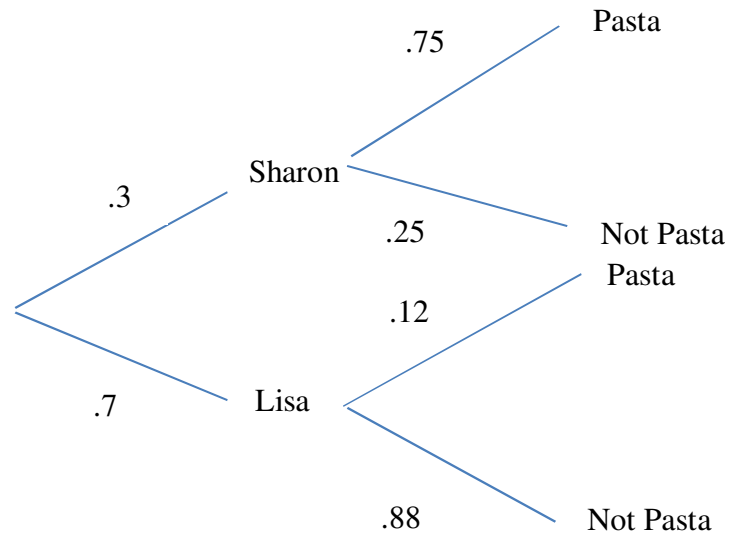
1. Yes... explanations may vary
2. .0892
3. .0017
4. .0625
5. .0050
6. .6067
7. .7400
8. .1758
9. 1.0000
10. .6250
11. .3333
12. 1.0000
13. .6000
14. 1.0000

15.



16. .0625

17.



18. .6160

19. .6910

20. .8915