

Final Exam Option 1 Answers

Multiple Choice and Numeric Response Answers

- | | |
|------------|----------|
| 1. A | 31. C |
| 2. C | 32. D |
| 3. 4 or IV | 33. A |
| 4. A | 34. C |
| 5. B | 35. B |
| 6. A | 36. C |
| 7. B | 37. D |
| 8. 24 | 38. A |
| 9. D | 39. D |
| 10. 28.3 | 40. C |
| 11. C | 41. D |
| 12. B | 42. B |
| 13. D | 43. B |
| 14. B | 44. 12 |
| 15. B | 45. 3.14 |
| 16. A | 46. 4.15 |
| 17. B | 47. B |
| 18. A | 48. C |
| 19. C | 49. B |
| 20. A | 50. C |
| 21. C | 51. A |
| 22. 20 | 52. B |
| 23. A | 53. A |
| 24. D | 54. D |
| 25. D | 55. D |
| 26. 78 | 56. B |
| 27. B | 57. D |
| 28. A | 58. A |
| 29. B | 59. 4312 |
| 30. C | 60. 16 |

Written Response Answers

1. a) $5 \times 6 = 30$
b)

		Die					
		1	2	3	4	5	6
Spinner	1	1, 1	1, 2	1, 3	1, 4	1, 5	1, 6
	2	2, 1	2, 2	2, 3	2, 4	2, 5	2, 6
	3	3, 1	3, 2	3, 3	3, 4	3, 5	3, 6
	4	4, 1	4, 2	4, 3	4, 4	4, 5	4, 6
	5	5, 1	5, 2	5, 3	5, 4	5, 5	5, 6

c) Answers may vary. Example:

		Die					
		1	2	3	4	5	6
Spinner	1	1, 1 = 2	1, 2 = 3	1, 3 = 4	1, 4 = 5	1, 5 = 6	1, 6 = 7
	2	2, 1 = 3	2, 2 = 4	2, 3 = 5	2, 4 = 6	2, 5 = 7	2, 6 = 8
	3	3, 1 = 4	3, 2 = 5	3, 3 = 6	3, 4 = 7	3, 5 = 8	3, 6 = 9
	4	4, 1 = 5	4, 2 = 6	4, 3 = 7	4, 4 = 8	4, 5 = 9	4, 6 = 10
	5	5, 1 = 6	5, 2 = 7	5, 3 = 8	5, 4 = 9	5, 5 = 10	5, 6 = 11

I would choose either 6 or 7 because each has a chance of occurring five times or $\frac{5}{30}$ or 16.7%.

2. a) $A = s \times s$

$A = 3 \times 3$

$A = 9 \text{ m}^2$

b) $A = \frac{1}{2}bh$

$A = \frac{1}{2}(9)$

$A = 4.5 \text{ m}^2$

c) $A = \pi r^2$

$A = \pi(2.1)^2$

$A = 13.847$

$A \approx 13.8 \text{ m}^2$

d) Estimates may vary. Example: $(50 - 10) \times 6 = 240$. The estimated cost is \$240.
Actual cost: $(50 - 13.8) \times 6.25 = 226.25$.
The actual cost to the nearest dollar is \$226.

3. a) $\frac{59 + 51 + 62 + 53 + 50}{5} = \frac{275}{5} = 55$. The

mean is 55 km. To find the median, arrange the numbers in order: 50, 51, 53, 59, 62.

The median is the middle number, 53.

b) Day 6: $275 + 55 = 330$; Day 7: $330 + 55 = 385$. Yes, Kari does get to Jasper by the end of day 7.

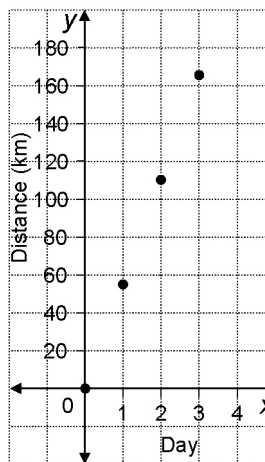
c) $T = 55d$

4. a)

d)

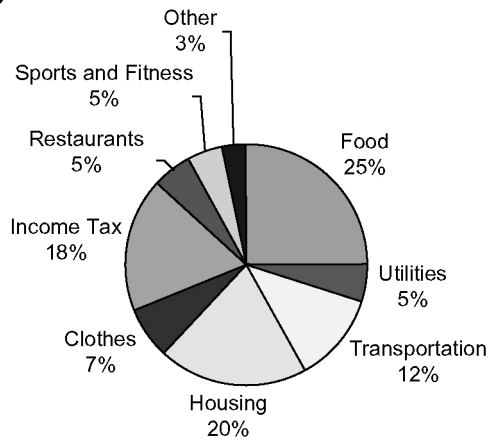
d	T
0	0
1	55
2	110
3	165

e)



Category	Percent of Total Income	Central Angle
Food	25%	$0.25 \times 360 = 90^\circ$
Utilities	5%	$0.05 \times 360 = 18^\circ$
Transportation	12%	$0.12 \times 360 = 43.2^\circ \approx 43^\circ$
Housing	20%	$0.20 \times 360 = 72^\circ$
Clothes	7%	$0.07 \times 360 = 25.2^\circ \approx 25^\circ$
Income Tax	18%	$0.18 \times 360 = 64.8^\circ \approx 65^\circ$
Restaurants	5%	$0.05 \times 360 = 18^\circ$
Sports and Fitness	5%	$0.05 \times 360 = 18^\circ$
Other	3%	$0.03 \times 360 = 10.8^\circ \approx 11^\circ$
Totals	100%	360°

b) How the Jansens Spend Money



c) Answers may vary. Look for a recommendation that is justified.

Examples:

- The Jansen family can eat out a little more often as they have 3% of their income left after all of their expenses.
- The Jansen family should not eat out more often as they have only 3% of their income left after all of their expenses. It might be wise to keep the 3% for emergencies, savings, or other events that arise.