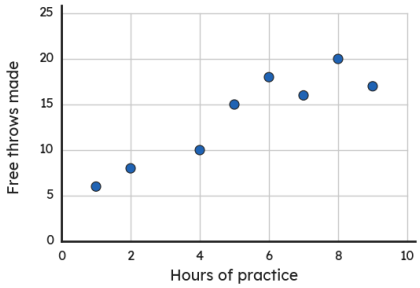
Name: _____ Date: _____

Estimating Lines Of Best Fit - Medium

Use a graphing calculator to find the line of best fit (round to the nearest hundredth) and the correlation coefficient r. Describe the correlation.

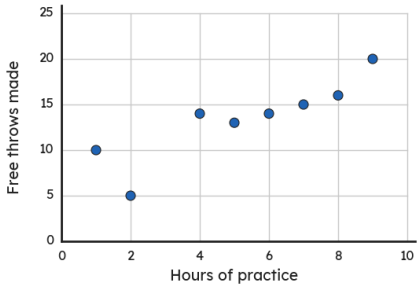
1. x: Hours of practice; y: Free throws made

x	1	2	4	5	6	7	8	9
y	6	8	10	15	18	16	20	17



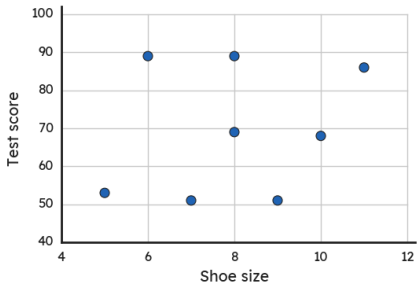
2. x: Hours of practice; y: Free throws made

x	1	2	4	5	6	7	8	9
y	10	5	14	13	14	15	16	20



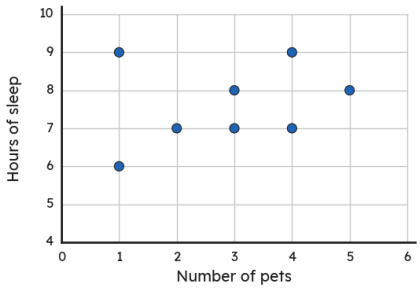
3. x: Shoe size; y: Test score

x	5	6	7	8	8	9	10	11
y	53	89	51	69	89	51	68	86



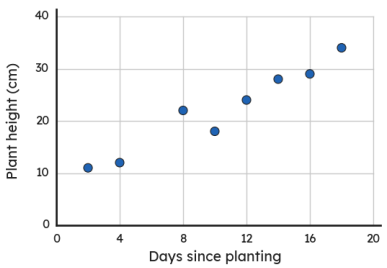
4. x: Number of pets; y: Hours of sleep

x	1	1	2	3	3	4	4	5
y	6	9	7	7	8	7	9	8



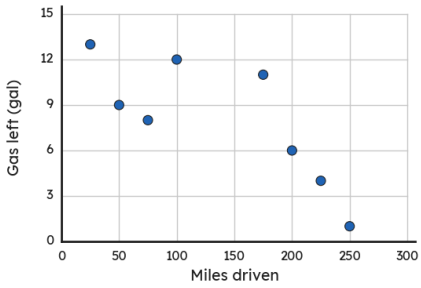
5. x: Days since planting; y: Plant height (cm)

x	2	4	8	10	12	14	16	18
y	11	12	22	18	24	28	29	34



6. x: Miles driven; y: Gas left (gal)

x	25	50	75	100	175	200	225	250
y	13	9	8	12	11	6	4	1



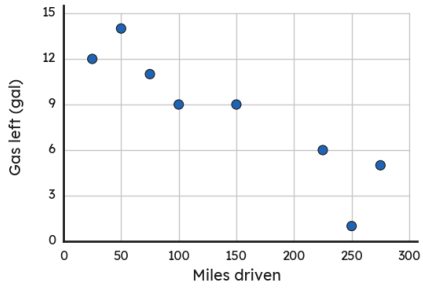
Name: _____ Date: _____

Estimating Lines Of Best Fit - Medium

Use a graphing calculator to find the line of best fit (round to the nearest hundredth) and the correlation coefficient r. Describe the correlation.

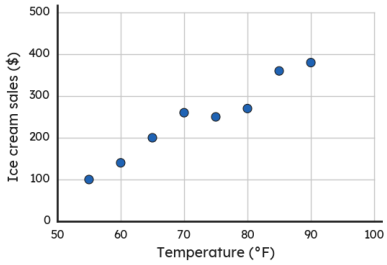
7. x: Miles driven; y: Gas left (gal)

x	25	50	75	100	150	225	250	275
y	12	14	11	9	9	6	1	5



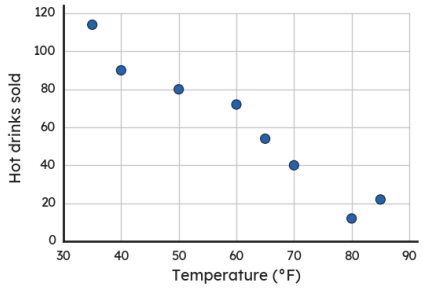
8. x: Temperature (°F); y: Ice cream sales ($)

x	55	60	65	70	75	80	85	90
y	100	140	200	260	250	270	360	380



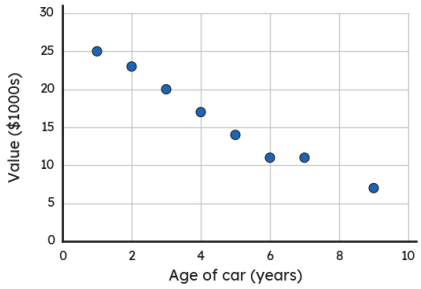
9. x: Temperature (°F); y: Hot drinks sold

x	35	40	50	60	65	70	80	85
y	114	90	80	72	54	40	12	22



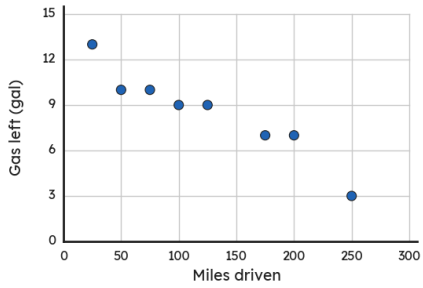
10. x: Age of car (years); y: Value ($1000s)

x	1	2	3	4	5	6	7	9
y	25	23	20	17	14	11	11	7



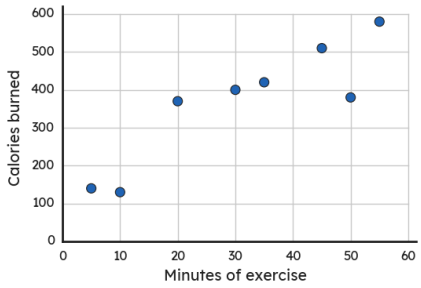
11. x: Miles driven; y: Gas left (gal)

x	25	50	75	100	125	175	200	250
y	13	10	10	9	9	7	7	3



12. x: Minutes of exercise; y: Calories burned

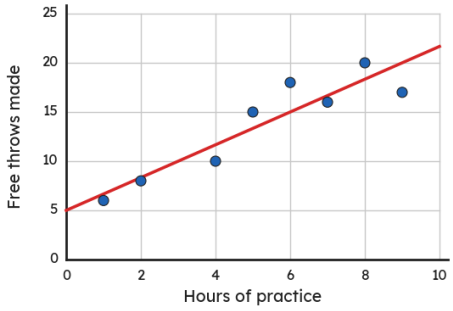
x	5	10	20	30	35	45	50	55
y	140	130	370	400	420	510	380	580



Estimating Lines Of Best Fit - Medium - Answer Key

1. x: Hours of practice; y: Free throws made

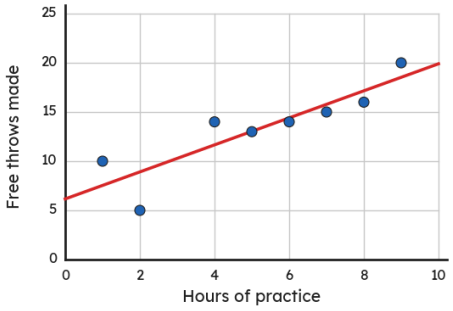
x	1	2	4	5	6	7	8	9
y	6	8	10	15	18	16	20	17



y = 1.67x + 5; r ≈ 0.92; strong positive correlation

2. x: Hours of practice; y: Free throws made

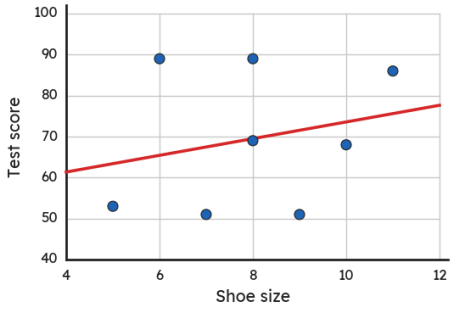
x	1	2	4	5	6	7	8	9
y	10	5	14	13	14	15	16	20



y = 1.37x + 6.16; r ≈ 0.88; strong positive correlation

3. x: Shoe size; y: Test score

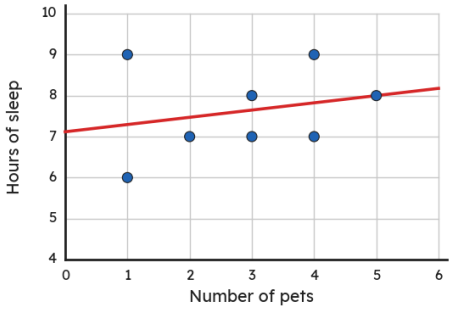
x	5	6	7	8	8	9	10	11
y	53	89	51	69	89	51	68	86



y = 2.04x + 53.21; r ≈ 0.24; almost no correlation

4. x: Number of pets; y: Hours of sleep

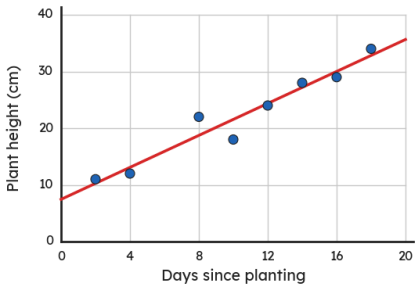
x	1	1	2	3	3	4	4	5
y	6	9	7	7	8	7	9	8



y = 0.18x + 7.12; r ≈ 0.24; almost no correlation

5. x: Days since planting; y: Plant height (cm)

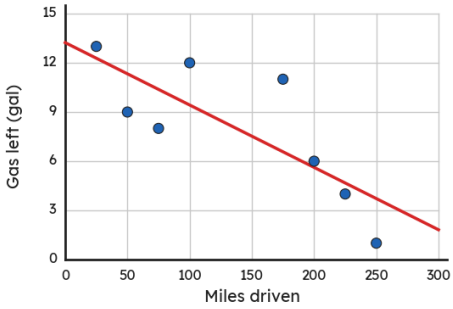
x	2	4	8	10	12	14	16	18
y	11	12	22	18	24	28	29	34



y = 1.41x + 7.45; r ≈ 0.97; strong positive correlation

6. x: Miles driven; y: Gas left (gal)

x	25	50	75	100	175	200	225	250
y	13	9	8	12	11	6	4	1

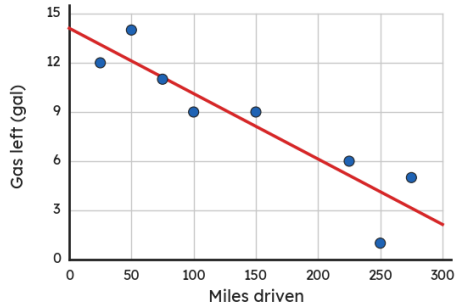


y = -0.04x + 13.23; r ≈ -0.79; moderate negative correlation

Estimating Lines Of Best Fit - Medium - Answer Key

7. x: Miles driven; y: Gas left (gal)

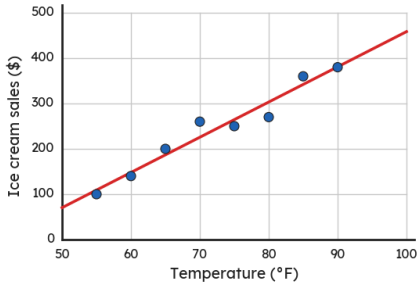
x	25	50	75	100	150	225	250	275
y	12	14	11	9	9	6	1	5



y = -0.04x + 14.11; r ≈ -0.91; strong negative correlation

8. x: Temperature (°F); y: Ice cream sales ($)

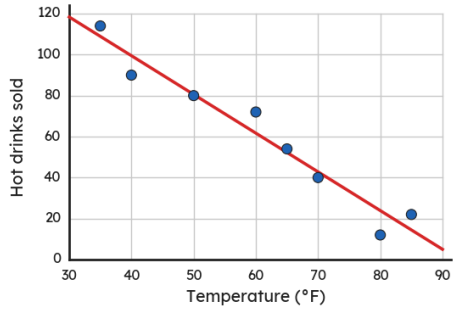
x	55	60	65	70	75	80	85	90
y	100	140	200	260	250	270	360	380



y = 7.76x - 317.74; r ≈ 0.98; strong positive correlation

9. x: Temperature (°F); y: Hot drinks sold

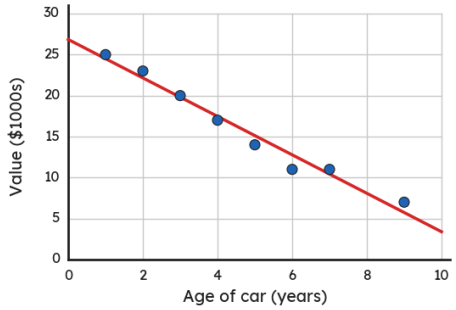
x	35	40	50	60	65	70	80	85
y	114	90	80	72	54	40	12	22



y = -1.89x + 175.05; r ≈ -0.97; strong negative correlation

10. x: Age of car (years); y: Value ($1000s)

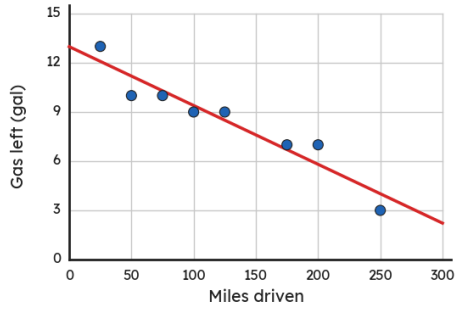
x	1	2	3	4	5	6	7	9
y	25	23	20	17	14	11	11	7



y = -2.35x + 26.85; r ≈ -0.99; strong negative correlation

11. x: Miles driven; y: Gas left (gal)

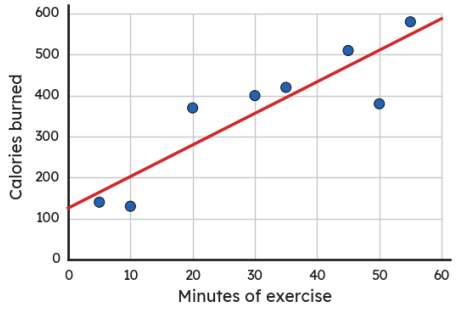
x	25	50	75	100	125	175	200	250
y	13	10	10	9	9	7	7	3



y = -0.04x + 12.99; r ≈ -0.95; strong negative correlation

12. x: Minutes of exercise; y: Calories burned

x	5	10	20	30	35	45	50	55
y	140	130	370	400	420	510	380	580



y = 7.7x + 125.58; r ≈ 0.89; strong positive correlation