

Answers

- 1) 80
- 2) 75 minutes (or 1 hour 15 minutes)
- 3) £2
- 4) (a) 5:3 (b) 60 minutes (or 1 hour)
- 5) (a) 15 (b) 24 minutes (c) 48 hours (or 2 days)
- 6) £7350
- 7) £147900
- 8) 3 030 000 (or 3.03 million)
- 9) "during April" or "by the 1st May" or similar answer
- 10) (a) 6%, (b) 22.0°C
- 11) 41.5 miles
- 12) During Year 4 because it will be £307 200 which is less than £375 000
- 13) £26.95
- 14) £16512.20 profit
- 15) (a) £546 (b) 4:3 (c) £159.25 (d) £42.09
- 16) (a) 72.4% (b) £160.80
- 17) £23326
- 18) (a) £6096.40, (b) £2747.97
- 19) £15367
- 20) £642.50
- 21) Yes he earns £5.40 more than he needs
- 22) £210.60
- 23) (a) £8873.50 (b) £55000
- 24) £5.20
- 25) (a) £5388 (b) £2387.36 (c) £2302.05
- 26) Andy earns £100 more than Jack
- 27) £1383.71
- 28) (a) 5 hours (b) £4.98, £71.47, £280.03
- 29) £1684.08
- 30) £6.24
- 31) (a) TV World £1024.98, McDonald's AV £875.73, TechCentre £926.65, (b) £208.95
- 32) (a) £136, (b) No, it is £41 more expensive, (c) family wristband is £97 cheaper than pass/tokens and £49 cheaper than individual wristbands.
- 33) Gold Ticket is £18.48 cheaper than Platinum and £55.64 cheaper than full price.
- 34) Royal Post is 70p cheaper than MailFast and £6.80 cheaper than RailMail.
- 35) £259.67
- 36) 1 315 269.76 Won
- 37) Cheaper in Sweden by £1017.47
- 38) (a) \$9632.40 (b) 775 (c) £718.75
- 39) £1812.50
- 40) £8110
- 41) (a) 2.75% (b) £66877.28
- 42) (a) £691.16 (b) £138.23
- 43) £2323.42
- 44) £467.33
- 45) £375
- 46) (a) 3.5% (b) £5938.43
- 47) Finesave, without payment protection

48) £20, which is 80p greater than 3.2%

49) £2026.80

50) (a) A = £4.80, B = £144.45, C = £3.61. (b) £25.94

51) £237.46 (must be rounded)

52) (a) A = £75, B = £1.20, C = £155.07 (b) £5

53) (a) $\frac{2}{25}, \frac{7}{150}$ (b) 9 (c) 2:3

54) (b) $\frac{1}{36}$ (c) $\frac{1}{9}$

55) Yes it has got better because last week was 60% and this week 64%

56) (a) $\frac{5}{24}$ (b) $\frac{5}{8}$ (c) b is more likely as $\frac{5}{8} > \frac{5}{24}$

57) No because girls probability is 0.082 which is greater than boys' probability of 0.0789

58) $\frac{2}{15}$

59) (a) Boxplot drawn and labelled:



(b) 2.5°C

(c) Comment 1 – temperature at noon higher/temperature at 8am lower

Comment 2 – temperatures at noon more consistent, temperatures at 8am more varied

60) (a) median = 4, IQR = 1.5 (b) $\frac{7}{15}$ (c) sentence 1: Gregor has more tests booked/Janet

has fewer sentence 2: Janet's number of tests is more consistent/Gregor's is more varied

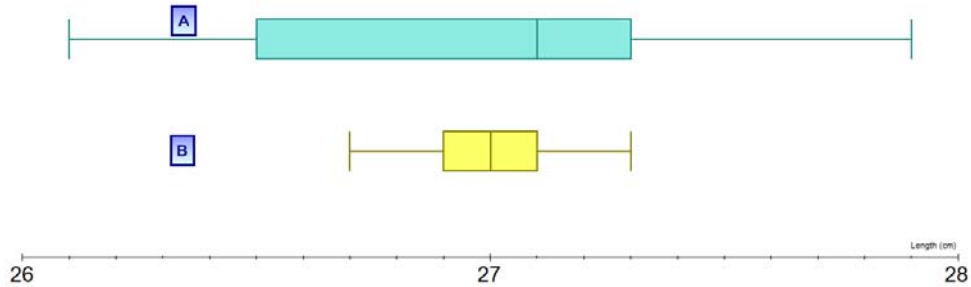
61) (a) median = 6.5, IQR = 4



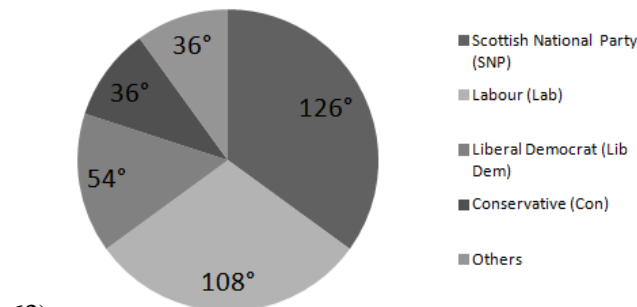
(b)

(c) Sentence one: train was late by fewer minutes than bus (NOT train was late less often) Sentence two: train was more consistent/bus more varied.

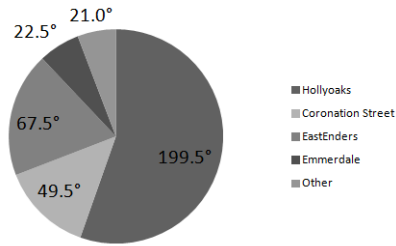
62) Boxplot:



Production Line B is better because it is more consistent.



63)



64)

65) Sentence one: people smoked more cigarettes before/fewer cigarettes after. Sentence two: the number of cigarettes smoked was more consistent before/more varied after

66) (a) Mean = 116, $s = \sqrt{\frac{1334}{5}} = 16.3$.

(b) Yes because the standard deviation was 12.2 which was less than 16

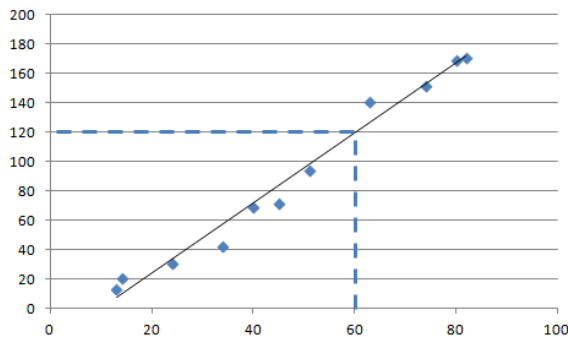
67) (a) Mean = 82, $s = \sqrt{\frac{50}{4}} = 3.54$.

(b) Mean = 102, $s = 3.54$

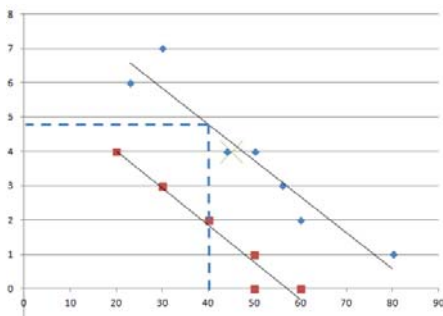
68) (a) Mean = 41, $s = \sqrt{\frac{22}{5}} = 2.1$.

(b) Yes because the mean is 41 which is between 38 and 42, and the standard deviation is 2.1 which is less than 3

69) (a) 27.3%, (b/c) see graph below (your graph should have labels on as well) (d) should match your graph. For the graph below the answer would be £120 per month



70) (a, b, d) see graph below (your graph should have labels on as well) (c) should match your graph. For the graph below the answer would be 5 (e) before because it's closer to that line of best-fit.



71) scale chosen, diagram drawn and labelled, the final answer should be close to 64km

72) the lengths are 850m and 900m. if your diagram is perfect, the length of the 3rd section is

671m. Using this figure $T = \frac{D}{S} = \frac{2 \cdot 421}{16} = 0.151$ hours = 9.08 minutes, so no did not break

record. However a small change in your diagram may lead to a different, but valid answer.

73) Final answer should be close to 69m.

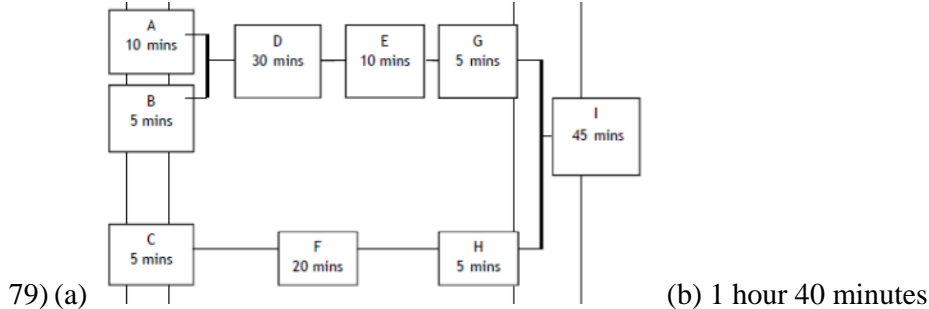
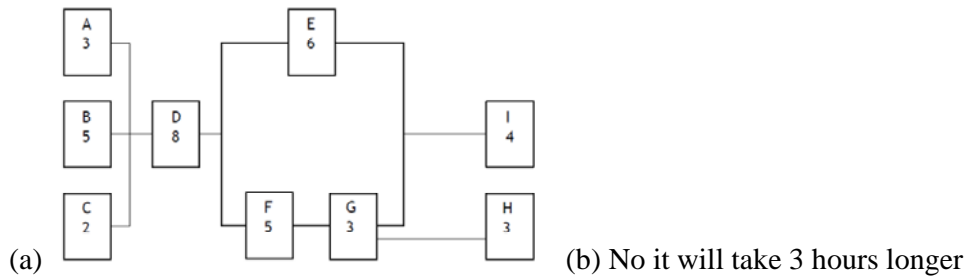
74) (a) 96 (b) 4

75) 160, when the 10cm side matches the 40cm side.

76) 20, which can be done in three ways (with 2.5 matching 5cm side and/or 2cm matching 2cm side)

77) (a) 50 (b) 66cm (c) 7

78)



79) (a)

80) (a) B, A, G, D/E, C, F (b) 1625

81) (a) Y, U/Z, V, W/X, T (b) 9 hours

82) (a) 3pm (b) Yes she will be 30 minutes before the deadline

83) (a) 7 hours 25 minutes (b) 2:41am

84) No as she should be home by 1908

85) (a) 3.75m (or 375cm) (b) 4.56m³

86) maximum = 3280.5cm³, minimum = 5989.5cm³

87) (a) 4.25cm or 42.5mm (b) 4.15cm or 41.5mm (c) B and C

88) 18.18%

89) (a) 2.55m (b) 2.65m

90) No because the temperature is 72°F which is not between 68.5 and 71.5°F

91) Yes because the gradient is 0.28 which is lower than 0.3

92) Yes because the gradient is 14.2% which is between 5% and 15% [you could also say "yes because the gradient is 0.142 which is between 0.05 and 0.15"]

93) 148.63m

94) (a) $\frac{1}{16}$ (b) No because the gradient is 1 in 16, which is less than 1 in 15.

95) (a) 113.04cm³ (b) 314cm³ (c) 1256cm³

96) 1020mm³

97) (a) 540cm² (b) £8300

98) 3845.3cm³

99) 5.445 litres, rounding to 5 litres

100) 17800cm³

101) (a) 1200cm² (b) 130cm (or 1.3m) (c) 117 litres

- 102) (a) 63000cm³ (b) 8.4cm rounding to 8cm
- 103) 650m³
- 104) 10
- 105) £42.61 (allow answers rounded to the nearest pound)
- 106) £156 (allow £153.92)
- 107) 0.335m/s
- 108) 1.6m²
- 109) (a) 5m (b) 21m² (c) 12.5m
- 110) 13m
- 111) 14.0m
- 112) (a) 13cm (b) Yes as it is 3cm shorter
- 113) 140km
- 114) 8200m (or 8.2km)
- 115) (a) 4 hours 12 minutes (b) 2207
- 116) a) 7.268m/s (b) 0.39km/min
- 117) 5.364km
- 118) 7 hours 6 minutes
- 119) 7 (a) 3004 (b) 20:7 (c) 27.8%
- 120) 7 34.3m
- 121) (a) 8 (b) 6.1 (c) 25% (d) 80:49 (e) $\frac{11}{43}$
- 122) (a) 110mm (b) No because the volume is 11.88 litres which is more than 11 litres
- 123) (a) 30.95% (b) Yes, they made a £210.60 profit (c) 9:2 (d) 225 minutes (or 3 hours 45 minutes)
- 124) (a) £1494.95 (b) table completed (c) Surplus of £791.15 (d) 5 months (rounded up from 4.4 months)
- 125) (a) diagram drawn (b) the answer will depend very much on your diagram... The steps are:
- Measure on page and then work out the real-life distance from P to Q in km
 - Measure on page and then work out the real-life distance from Q to R in km
 - Add the two distances and use $T = \frac{D}{3.2}$
 - Change answer to hours and minutes
 - Subtract from 0600
- 126) 114.1cm³
- 127) 8
- 128) (a) 17m/s (b) 1200m
- 129) (a) $\frac{1}{3}$ (b) 7.875m³
- 130) (a) 23.3% (b) median = 35, LQ = 22, UQ = 39, IQR = 17 (c) Boxplot drawn and labelled (d) Sentence 1: S4 spend longer on HW/S1 spend less. Sentence 2: S4 time spent on homework is more consistent/S1 more varied.
- 131) (a) 12.1cm (b) 240 (c) 4