

Calculating percentage discounts

Calculate the value of the discounts offered on these cars.

	Car Marked price	Discount (as a % of price)	Value of discount (nearest \$)
①	Ford Mustang \$61 394	9.6%	
②	Mazda MX-5 \$37 351	11.15%	
③	Fiat Abarth 124 \$43 500	7.25%	
④	Mercedes-Benz Valente \$65 149	12.125%	
⑤	Honda Civic \$24 990	3.05%	
⑥	Holden Colorado \$39 990	5.25%	
⑦	Alfa Romeo Giulia \$59 900	6.66%	
⑧	Lexus IS \$66 535	6.57%	
⑨	Hyundai i40 \$43 187	13.35%	
⑩	Suzuki APV \$18 990	0.75%	

Score 2 points for each correct answer! SCORE /20 0-8 10-14 16-20

Statistics & Probability

Conducting chance experiments

The following data shows the number of tries and the results for different tests of chance.

Notes:

- **Target** means a specific result. For example, the number of times that three sixes were thrown by three dice.
- **Reliability** is the assessment of how reliable or dependable the test was. When deciding how reliable a test was, consider the number of times a test was repeated, and any difference between the probability and the actual results.

Decide how reliable each test was. Rank the reliability from A (Not reliable at all) to E (Very reliable).

No. tries	No. times Target hit	Probability as % of No. tries	Reliability
2000	200	10%	①
6750	1013	15%	②
11 800	1180	10%	③
100	25	25%	④
5250	40	0.75%	⑤
500	250	50%	⑥
7500	1125	15%	⑦
50	3	5%	⑧
10 000	7500	75%	⑨
2250	450	20%	⑩
10	1	10%	⑪
12 050	1800	15%	⑫

Score 2 points for each correct answer! SCORE /24 0-10 12-18 20-24

Measurement & Geometry

Interpreting timetables

This timetable shows Qantas and Jetstar flights from Adelaide to Brisbane.

Flights Out: Adelaide to Brisbane, August 2018									
Depart (Adelaide Time)	Arrive (Brisbane Time)	18	19	20	21	22	23	24	Flight No.
06:00	07:50	▲	▲	▲	▲	▲	-	-	QF660
07:10	09:00	-	-	-	-	-	-	▲	QF1590
07:20	09:05	-	-	▲	-	-	▲	-	QF6606
09:50	11:40	▲	-	▲	▲	-	-	-	QF1592
13:00	14:50	▲	▲	▲	▲	▲	-	▲	QF662
13:40	15:30	-	-	-	-	-	▲	▲	QF662
16:20	18:10	▲	▲	▲	-	-	-	-	QF1598
16:20	18:20	-	-	-	▲	▲	▲	▲	QF664
17:05	19:00	★	★	★	★	★	★	★	JQ783
19:25	21:15	▲	▲	▲	▲	▲	-	-	QF656

Key: ▲ Qantas/QantasLink, ★ Jetstar

Source: Qantas, <https://www.qantas.com/au/en.html>. The timetable was modified for the purpose of this exercise.

Score 2 points for each correct answer! SCORE /24 0-10 12-18 20-24



Use the timetable to answer the following questions.

- ① How many flights are there in total?  
\_\_\_\_\_
- ② Why are the departure times clarified with 'Adelaide Time' and 'Brisbane Time'?  
\_\_\_\_\_
- ③ What flight number is the earliest Qantas flight departure?  
\_\_\_\_\_
- ④ How long is Flight QF662 scheduled to take on 19 August?  
\_\_\_\_\_
- ⑤ What flight numbers have only two departures out of Adelaide?  
\_\_\_\_\_
- ⑥ How many Qantas flights are there?  
\_\_\_\_\_
- ⑦ Which Qantas flight is scheduled to be the quickest?  
\_\_\_\_\_
- ⑧ Which Qantas flight is scheduled to take the longest?  
\_\_\_\_\_
- ⑨ What is the most common time a Qantas flight is scheduled to take?  
\_\_\_\_\_
- ⑩ How long are the Jetstar flights scheduled to take?  
\_\_\_\_\_
- ⑪ On which date are there the fewest flights scheduled?  
\_\_\_\_\_
- ⑫ On which date are there the most Qantas flights scheduled?  
\_\_\_\_\_

Score 2 points for each correct answer! SCORE /24 0-10 12-18 20-24

You may use a calculator for these questions. Round decimals to the nearest three decimal places.

- ① Chi bought a house for \$800 000 which was at a discount of \$2000 off the asking price. What is that discount as a percentage of the asking price?  
\_\_\_\_\_
- ② Dinh got a 12% discount on a bicycle that was marked at \$250. He gave a quarter of the money he saved to his sister and spent the rest on a helmet. How much did the helmet cost?  
\_\_\_\_\_
- ③ Linh had a \$600 budget for a new TV, but the TV cost \$800. What's the smallest percentage discount Linh needs to get to afford the TV?  
\_\_\_\_\_
- ④ Dinh got 20% off a computer game that was marked at \$80. Linh got a 15% discount on a board game that was marked at \$60. Who saved more and by how much?  
\_\_\_\_\_
- ⑤ Linh had \$55.00, Chi had \$46.50 and Dinh had \$63.50. They put their money together to buy a radio priced at \$160.00, but they got it at a 12% discount. How much money did they have left after buying the radio?  
\_\_\_\_\_
- ⑥ Dinh had a 40% chance of winning a game. This was twice as good as Linh's chance of winning. What was Linh's chance of winning, as a decimal?  
\_\_\_\_\_
- ⑦ Chi and Linh had an equal chance of winning a game while Dinh had a  $\frac{2}{5}$  chance of winning. There was a 20% chance that no one would win. What was Linh's chance of winning, as a decimal?  
\_\_\_\_\_

