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HIGHER

H03-10min Risk (Higher): 10-minute Pack

EDEXCEL 1ST0 · Calculator allowed · about 10 minutes

Total Marks

Name: ________________________________ Date: ____ / ____ / ______

Answer ALL questions. Show all your working.

1 Three parts suppliers report the risk of a faulty part in their most recent shipments.

Supplier P: risk of a fault = 1 in 25
Supplier Q: risk of a fault = 3%
Supplier R: risk of a fault = 1/16

(a) Convert each risk to a percentage, and hence write the three suppliers in order of risk, from lowest to highest. **(3)**

....

(b) State which supplier has the safest (lowest risk) production process. **(1)**

(Total for Question 1 is 4 marks)

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2 A bookmaker quotes odds for two horses in a race.

Horse 1: odds against winning = 9 to 1
Horse 2: odds on winning = 2 to 1 (Horse 2 is more likely to win than to lose)

(a) Work out the probability that Horse 1 wins the race, as a percentage. **(2)**

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(b) Explain the difference between odds on and odds against, and work out the probability that Horse 2 wins the race. **(2)**

(Total for Question 2 is 4 marks)

Mark scheme · H03-10min Risk (Higher): 10-minute Pack

Question 1

- (a) **M1** at least two of the three risks converted to percentages, oe
- (a) **A1** 4%, 3% and 6.25% all correct
- (a) **A1** Q, P, R cao (correct order, lowest to highest)
- **(a) Answer: P = 4%, Q = 3%, R = 6.25%; order: Q, P, R**
- (b) **B1** Q cao, ft from part a
- **(b) Answer: Supplier Q**

Question 2

- (a) **M1** 1 divided by (9 + 1), oe
- (a) **A1** 10% cao
- **(a) Answer: 10%**
- (b) **B1** correct explanation, e.g. odds against are written as (chance of losing) : (chance of winning), used when an event is less likely than not; odds on are written the other way round, (chance of winning) : (chance of losing), used when the event is more likely than not, oe
- (b) **B1** 2/3 or 66.7% awrt cao
- **(b) Answer: 2/3 (approximately 66.7%)**