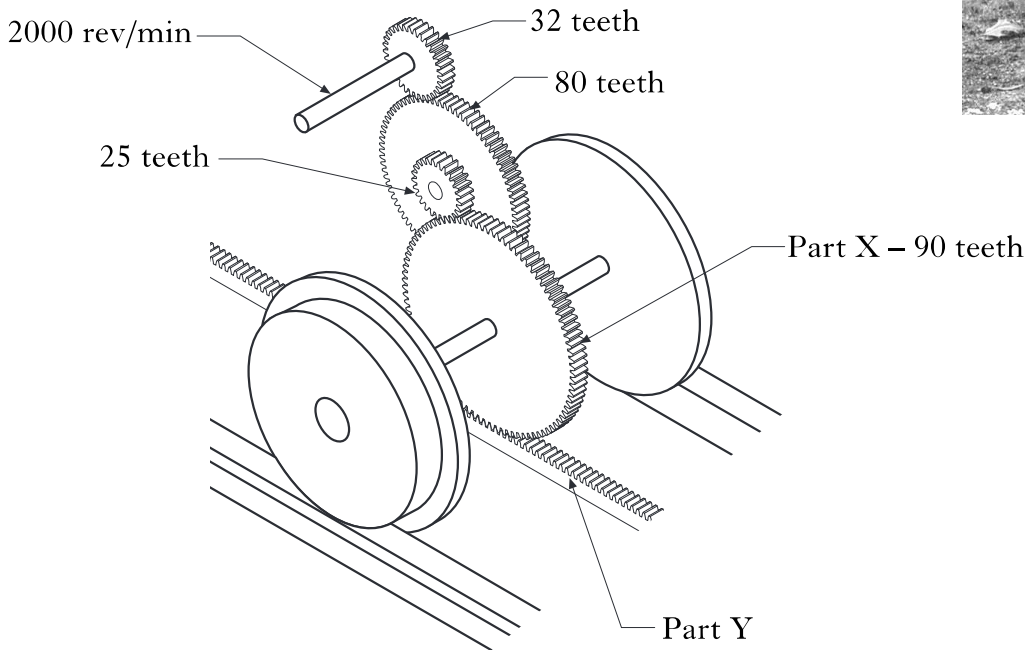


9. A model train climbs a steep slope at an amusement park. A simplified diagram of the train drive system is shown here.



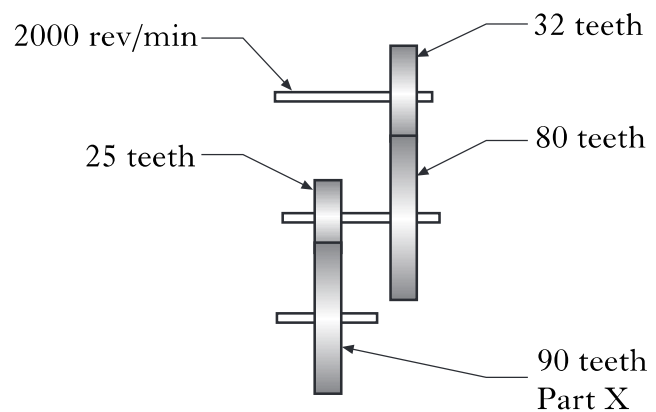
- (a) State the names of the labelled parts of the drive system in the diagram above.

Part X _____

Part Y _____

2
1
0

- (b) A simplified diagram of the train drive system is shown. Calculate the speed of the 90 tooth gear.



_____ rev/min

4
3
2
1
0

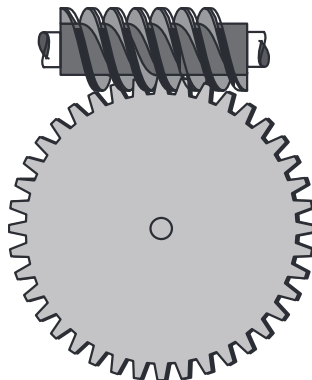
7. (continued)

(c) Calculate the output speed of mechanism (A).

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4
3
2
1
0

Mechanism (A) is decided to be too bulky and is replaced by the following mechanism.



(d) State the name of this mechanism.

1
0

(e) Describe how friction could be reduced in a mechanical system.

1
0

(f) State the names of **two** mechanisms that will convert rotational motion into linear motion.

1 _____

2 _____

2
1
0