28. We may treat all 25 cars as a single object of mass $m = 25 \times 5.0 \times 10^4$ kg and (when the speed is 30 km/h $= 8.3$ m/s) subject to a friction force equal to $f = 25 \times 250 \times 8.3 = 5.2 \times 10^4$ N.

(a) Along the level track, this object experiences a "forward" force T exerted by the locomotive, so that Newton's second law leads to

$$T - f = ma \implies T = 5.2 \times 10^4 + \left(1.25 \times 10^6\right)(0.20)$$

which yields $T = 3.0 \times 10^5$ N.

(b) The free-body diagram is shown below, with θ as the angle of the incline. The $+x$ direction (which is the only direction to which we will be applying Newton's second law) is uphill (to the upper right in our sketch).

Thus, we obtain

$$T - f - mg\sin\theta = ma$$

where we set $a = 0$ (implied by the problem statement) and solve for the angle. We obtain $\theta = 1.2°$.