

*Scrap paper is available but write your final solution clearly in the space provided*

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[1] D

[2] a

[3] a)  $\frac{PR}{PT} = \frac{PQ}{PS} = \frac{4}{2} = \frac{2}{1}$     b)  $\frac{ST}{QR} = \frac{PS}{PQ} = \frac{1}{2}$     c)  $\frac{PS}{PQ} = \frac{1}{2}$  so  $\frac{\text{area of } \Delta PST}{\text{area of } \Delta PQR} = \frac{1^2}{2^2} = \frac{1}{4}$

[4] D

a)  $(x+6)(x-3)$

b)  $2x-6$

[5] c) 162

[6] VY = 24 cm, WY = 16 cm, VZ = 21 cm, and XZ = 14 cm

[7]  $\left(\frac{5}{2}, 4\right)$

a)  $y = 3x + 1$

b)  $y = -2x + 6$

c)  $y = x^2 - 3x + 7$

[8] d)  $y = 5x^2 + 2$