

3. Rachel is investing money in two different funds for one year, Joey Mutual Fund and Ross Bond Fund. The Joey fund is expected to yield 12% simple interest and the Ross Fund is expected to yield 4% simple interest. If Rachel invests a total of \$6,000 into the two funds and she wants to receive \$440 in interest during the year, how much money should she put in the Ross Fund?

4. It takes Tom 6 hours to paint a fence and Huck 4 hours to paint a fence. If they work together, how long will it take them to paint the fence?

5. Jack is walking slowly away from a lamp post. After a short time, he notices that the tip of his shadow reaches to the outer edge of the light's ray. At this point, he notices that he is 8 ft away from the tip of his shadow and 32 ft from the lamp post. If Jack is 6 ft tall, how high is the lamp post?
6. Frank the farmer is building a compost bin. He wants the bin to hold 5 cubic meters of material. If the bin is a right circular cylinder and has a base with a radius of 90 cm, how high should the bin be if the volume of a right circular cylinder is given by $\pi r^2 h$ (round your answer to the nearest cm)?

