

No calculators

provided on this page.

Scoring: A question is either completely correct (1 point) or wrong (0 points).

If you score under 4 on this test, you should consider dropping the class.

If you score 4–7, seek help **NOW**: maybe enroll in CLAS?

If you score 8–10, congratulations! You are ready for Math 34A.

1. Solve for x in the equation

$$3(x + 4) = k(x - 2).$$

$x =$

2. Multiply out and simplify. Check your answer.

$$(1 + x)(1 - 2x + x^2)$$

3. Put over a common denominator and simplify.

$$\frac{2x + 3}{3} - \frac{3x + 2}{5}$$

4. What is 25% of $\frac{4}{3}$ of 12?

5. Calculate

$$\frac{20}{\left(16 - \left(\frac{1}{3} - \frac{1}{4}\right)^{-1}\right)^2}$$

6. A car travels at 50 mph for 3 hours and at 60 mph for the rest of the journey. The length of the journey is 270 miles. How many hours did the entire journey take?

hours

7. Solve for x and y

$$3x - 5y = -2$$

$$x + y = 10$$

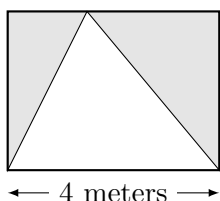
$x =$

$y =$

8. An entrepreneur bought 7 tons of apples for \$100 per ton. She sold half the apples at a price of \$200 per ton. She sold another ton for \$150. The remainder she sold at \$100 per ton. How much profit did she make?

\$

9. What is the area of the shaded region?



3 meters

square meters

10. If I earn \$200,000 and pay \$80,000 in tax, what percentage of what I earn do I keep?

%