

boxes

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

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

$$x = \frac{(2k-12)}{(3x-kx)}$$

2. Multiply out and simplify. Check your answer.

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

$$x^3 - x^2 + x + 1$$

3. Put over a common denominator and simplify.

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

$$\frac{x+9}{15}$$

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

4

5. Calculate

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

$$\frac{5}{4}$$

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?

5 hours

7. Solve for x and y

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

$$x + y = 10$$

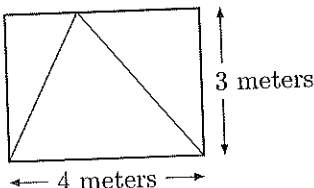
$$x = 0$$

$$y = 4$$

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?

\$ 400

9. What is the area of the shaded region?



$6m^2$ square meters

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

60 %